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THE EARTH GEIST AND
ITS WORSHIPPERS

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BY

F. R. WARING

AUTHOR OF

"NATURE AND LAW" AND "TRUTHS *v.* SHADOWS"

*All are but parts of one stupendous whole,
Whose body Nature is, and God the soul.*

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P R E F A C E

THE object in view in the following pages is to lay before the public the opinions of eminent men of the present day on the all-absorbing questions of Evolution and Materialism, with their allied forces Positive and Agnostic. In pursuance of this object it is proposed to give the decrees not of ordinary every-day people, but of men of the highest authority, both in the literary and scientific world, on the questions at issue ; and in order that the public may be fully acquainted with the subjects under different aspects, it is intended to give literal quotations of the openly expressed opinions, *pro* and *con*, of the most elevated men, scientific, literary and philosophical, in elucidation of their special convictions on these most important questions.

The importance of the subject (considered

in its entirety) leaves considerations of a simply terrestrial nature far beneath it in interest ; we may affirm, with a large amount of reason, that the separation between the views of the two orders of men is as wide as heaven is from earth, or, to speak more intelligibly, as *fact is from theory* ; for as regards these two it is a truth irrefragable that they are utterly irreconcilable—that is to say, cannot exist together ; for *the instant* the latter is relieved of its inevitable ambiguity and becomes a fact, it ceases absolutely to exist as a theory. The question, then, for the reason of man to determine is, What is truth and fact, in opposition to what is theoretical and false—false because simply theoretical ? The query may then thus be extended : Which, as reasonable beings, are we bound to believe in—the laws of God in Nature, or the laws of Darwin and the evolutionists ? It would probably be less ambiguous to speak of *the laws of Nature* simply, though Carlyle—no light or unworthy thinker—speaking of Nature, exclaimed, “Ha ! why do I not call thee God’s ?” In another place he speaks of Nature as “the living garment of God,” the

garment which the Almighty has implanted on the material things of earth. Nature is in this aspect placed on a pedestal far above the reach of the materialist. The query, Will you believe in the laws of God or the laws of Darwin? seems rash and indefensible; but some palliation, if not justification, of it may be found in the direct antagonism of Darwinism to that Book which most learned, pious and intelligent men rely on as intrinsically the word of God. In that Book we read that "God created man in His own image." There is no room here for the suggestion of a monkey origin. It also states that "God gave man dominion over the fish of the sea, the fowl of the air, and every living thing that moveth upon the earth."

Again, with respect to the *first created pair*, "God blessed them and said unto them, Be fruitful and multiply, and replenish the earth *and subdue it.*" That these decrees are fully realised in the power man exercises over the lower animals and the terrestrial kingdom at large, is so apparent and so everywhere and continuously in evidence, that no one of ordinary intelligence can fail

to see and know it. Yet Darwin takes upon himself to dispute it; it fits not in with his theories of natural and sexual selection, and therefore he feels bound to deny what his experience must have convinced him was a fact, clearly proving how far from truth a bias may mislead the mind. To deny man's power over both the animal and vegetable things of here below is to deny the law of God respecting him. Were this merely an opinion it might be left unnoticed; but little as seems to be the connection between this first step in denial of God's will and authority, yet the evil of it has been far-reaching; and one of the dynamiters and the wretched youth who murdered that excellent man, the President of the French Republic, were led to the performance (they declared) of their detestable crimes by the literature of Darwin, H. Spencer, and writers of that class. They hoped to get good out of evil, which, even admitting that an evil exists, is not the right road or reasonable to its removal.

It is, then, proposed in the following pages to give in full the opinions of the Evolutionists, Positivists, and Materialists in their

own, openly pronounced words; and the opinions also of men of scientific and literary eminence in controversion of those theoretical speculations, so that the public may be able to form a just estimate of the right or wrong as regards the questions at issue.

I will now proceed to give the openly announced opinions of men eminent in literary, scientific, and philosophical associations, and as such entitled to our respect as exponents of the truth as it exists in Nature of their views regarding her.

Let us, then, take as a first illustration the opinions of Sir William Grove, a man held in high estimation as a literary and scientific authority, and much respected in society at large, as his position of President of the British Association for the Advancement of Science clearly indicates. He then, in his capacity of President, took for his subject no less an object than an elephant, about which animal, his whence and his how, he desired both for his own satisfaction and that of his audience, to possess some special, scientific, and reliable information. Regarding the origin of the brute our ordinary knowledge is conclusive. *Each had a pro-*

genitor. Such was Grove's final dictum, and regarding which he remarked, "If the animal was created without progenitors, whence did he come? Did he fall from the sky? Did he rise from a mass of amorphous rock, or out of the cleft of a tree? Without in any way or degree limiting the power of the Almighty, if he had no antecedent progenitors, such a *beginning must* be assigned to him." Such is Grove's determination; but he said, "Those who do not adopt some view of continuity are content to say God willed and ordered it, but it is more *reverent* or philosophical to reason about it from induction and analogy than to believe in the probability of *frequent miraculous* interventions." Such a belief is most unusual, and is quite illegitimate, for from the first creation both of the animal and vegetable world, this law has been, and now is, doubtless in full, effective, and persistent operation, admitting variation to even a very marked extent, but altogether excluding actual change. This law is open to our daily observation—so open that no one with ordinary perceptions can fail to see it, and no one with ordinary intelligence can

fail to recognise it as an inevitable law of Nature.

It is mentioned in the Bible as a law in perpetuity, "Whose seed is in itself upon the earth." Some critical people will say this referred merely to the vegetable world. Well, open your eyes and your God-given intelligence, and you must see and know that it applies with equal force to the animal creation: a law that needs no revision and admits no change. Sir William Grove, evidently full of disbelief on this point, asks, "*If* what are termed species have been rigidly determined and limited, and have been created complete and unchangeable? or whether, *in some mode or other*, they have not gradually and *indefinitely* varied, such changes being due to surrounding circumstances and the efforts to accommodate themselves to these *by what is termed* Natural Selection?"

Natural Selection is here supposed to act, "*in some mode or other*," and *indefinitely*, in the matter of variation as regards species. To reduce it to a condition of impotence and imbecility no mode of interpretation could be more successful.

The question regarding the elephant and his progenitors involves a series of interrogatories to which an intelligible response can never be truly given, for as regards the progenitor the same query is demanded, and so on and so on through the whole range of living beings, down to the *protoplasm*, whose origin is still involved in the same obscurity, and open to the same baseless and worthless interrogatory, for there is clearly no science or intelligence earth-born, that can explain the mystery ; and Sir William Grove himself observes, “ No scientific writer has *ventured to give* any definite notion of *how* such an event could have occurred.” He stated that he had no theory of his own on the subject, and further remarked, “ We have not evidence enough *even to speculate* regarding it, *but by time and patience we may acquire it.*”

Now what is the image here presented to our view ? what the lesson to be learnt from it ? but that of science in a state of utter *prostration*, without a movement or reasonable prospect of any capability of advance in any direction ; even theory itself is capable of no suggestion, but ignorance, not dejected at its evident shortcomings, continues full of

hope and belief that in firm dependence on an alliance with time and patience it will become of capacity to solve the problem of the elephant, and further still to erase from the minds of men any belief in the power of a Creator of the Universe, or the fact of the presence of the Almighty in that material world which is under his sole supervision and entire control.

The inference, then, regarding the problem proposed for solution by the President, is that it is altogether unrealisable ; for what real intellectual advance can be expected from an ignorance (such as is *admitted* by the lecturer) in alliance with patience and time (given as much of the two latter as it is possible to imagine) to throw any true light on the problem of the origin of the elephant or that of any other living creature on the earth. Do not such inquirers aptly illustrate in their own individual personalities the fact of the blind leading the blind, with the inevitable ditch before them ?

In conclusion, with regard to progenitorship, which is the main progenitor—the acorn of the oak, or the oak of the acorn ? the male of the elephant, or the female ?

do they not illustrate the truth of *the* Scripture which utters this infallible, incontrovertible and unchangable law, true as respects both vegetable and animal existences alike, in these precise words, "Whose seed is itself upon the earth." Spoken of one it relates to all, and is final and unchanging with regard to each ; were it not so we should find nothing special, but only a patchwork of no fixed quality and vagueness everywhere, in place of the beautiful order of Nature now prevailing. Who, out of a lunatic asylum, would expect the acorn to produce anything but an oak, or an elephant anything but an elephant, or, in fact, *any tree or animal* to produce anything other than its own likeness, in its own special form and general functions ? to sum up all with man himself. But *here* Darwin seems inclined to differ, for as regards mankind he remarks, " No two individuals of the *same race* are *quite alike* : *faces are very different*, *great diversity* exists in the various parts of the body, the *length* of the *legs* being *most variable*, *skulls* differ, *teeth* differ, the *muscles are eminently variable*, the *arteries frequently run abnormal courses*." With respect to this last assertion, the physician

would be much perplexed and surprised, when he would as usual feel his patient's pulse, to find there no pulse. When Darwin speaks of irregularities he means, of course, deviations from regularity. These, therefore, if rightly viewed considering their extreme rarity, prove the beautiful uniformity of the human fabric; viewed in any other way they are simply false, unscientific, and prove nothing but the perverse and most irregular direction of the writer's thoughts. What his object is in speaking thus disparagingly of the beautiful and normal symmetry of the human frame is not clear, or what is to become of the human family ultimately under such diversities is not explained by him.

But I have no belief in any transformation scene (such as he suggests) in any part of the symmetrical, beautiful and orderly system of nature as normally presented before us.

The admirable and luminous article in the *Fortnightly Review*, July 1895, by Grant Allen, entitled "The Mystery of Birth," establishes the unchangeable uniformity of Nature's processes and growths through what he calls "the process of assimilation." He first describes how Vochting cut a plant

into minute fragments, and how, after some time, young sprouts sprung up from the divisions and ultimately a perfect plant, identical in every particular with the original one. On this he remarks : “A plant grows continually *as itself*, not some other. You take a rose-cutting and plant it in moist earth, it roots and grows, and what does it become ? A pine-tree or a bramble ? No, a rose, individually similar to the plant from which you took it ; not only is it a rose-bush, but it is a *Marechal Niel*, or a *Gloire de Dijon*, *exactly like* its predecessor from which you took it, and *year after year it goes on assimilating* and converting *into the me the not me*, down to the minutest particulars. The same process goes on in the animal kingdom, the amœba takes into its own body foreign substances, absorbs and alters some and rejects others. What it absorbs it assimilates—in other words, makes them into amœba.” Take (says Grant) a higher animal, *say man*. He eats food, it passes into his stomach, is absorbed and assimilated. Now I am not going to dogmatise about the precise changes that come over it in the passage from *the not me into the me*; all I can say is

this, the food that went into William Evans's body as bread or beef ceases, sooner or later, to be bread or beef, and becomes transformed into the formative material of William Evans—it becomes not merely human lymph and blood, but European white man's lymph and blood, *Welshman's blood, William Evans's blood*, the identical formative and restorative materials of William Evans. Not only do they constantly rebuild William Evans, but with all the *marks of his past history imprinted on him*; and this is the point to which I wish to direct attention, that the animal takes in continually from without, portions of the *not me*, reduces them, by assimilation, into the *me*, to components of its own structure, and uses them to supply the wear and tear of every-day existence."

Are not these patent facts, and can that man be considered wise who not merely doubts, but dares to deny them? Is it not the fact that *year after year* the special roses, given by Grant Allen, become renewed in every minutest particular with preceding annual specimens? Has the theory of Evolution any claim to intervene in this beautiful law of succession? Is there any

rational ground for its intrusion? Is it not simply a disturbing element in an orderly scene—an altogether misbegotten vision, disorderly, unfructuous, and to Nature abhorrent? Grant Allen gives us a picture of Nature pure and, as far as our perceptive powers permit us to judge, unchangable, perfect, final.

• The theory of Evolution, as far as Nature is concerned, commences in doubt and ends in confusion; doubting mainly the wisdom of the doubt which gave it birth.

TYNDALL

THE name of Tyndall is only to be mentioned for his place in the scientific world as an eminent expounder and leader to be at once recognised.

In an article in the *Fortnightly Review* he declared its, or his, intention to be, "The removal of anthropology and cosmogony out of the hands of a God and special Creator, and placing them in the hands of scientific men for solution." We claim and we shall wrest from theology the entire domain of cosmological theory. His view of theology he gave as follows, in answer to Mr. Martineau, who spoke of the comfort of religion. He replied: "I choose the nobler part of Emerson, I covet truth." Again, to Mr. Martineau, who spoke of a First Great Cause, a Creator and Ruler of the universe, he said: "If you could transform these

assumptions by any process into objective knowledge, I would believe there was such a Being so endowed ; but if there is such a power, let it be produced." Here he would call down heaven to earth for the satisfaction of his doubts. He continues : "On a mindless nature Mr. Martineau pours forth his invective ; but could the assumption of an Eternal Mind, render this world a whit less ugly and mean than it is?" This calls to mind Lord Byron's remark, in the presence of beautiful scenery, thus expressed, "Where all but the spirit of man was divine." and as Tyndall claims Emerson as an ally, let us see how totally different their views are, at least as regards this world. Thus, Emerson wrote the following : " Let us build altars to the blessed Unity, which holds Nature and souls in solution. I do not wonder at a snowflake, a summer landscape, or the glory of the stars, but at the necessity of beauty under which the universe lies, there is no need for foolish amateurs to fetch me to admire a garden of flowers, a sungilt cloud, or a waterfall, when I cannot look without seeing splendour and grace. How idle to choose a random sparkle here or there, when

the indwelling necessity plants the rose of beauty on the brow of chaos and discloses the central intention to be *harmony* and *joy*."

We have here found reason to deny Tyndall's insinuation that Emerson was an unbeliever, and also sufficient to disprove the justice of his assertion of the meanness and ugliness of this world ; but he carries his superior wisdom still further, and in his controversy with Mr. Martineau regarding Nature, which, in his opinion, admits of easy explanation, he remarks : "All is due to the materials of which she is composed." He proves this in the following way : "I stood under an oak-tree planted by Sir John Moore, the hero of Corunna, near which little oaklets were fighting for life ; the acorns had dropped on a friendly soil." He adds : "What is the acorn ? what the earth ? and what the sun ? without whose light and heat no oak-tree could be ; I answer for myself, all matter." He carries this line of argument into the constitution of men, and remarks : "Every human being comes from an egg of the minutest dimensions. Is this egg matter ? I hold it to be so. Are the additions during gestation drawn from matter ? I think so

undoubtedly. . If there is anything else, what is it?"

Tyndall then speaks of the organ of vision, with its lenses, its humours, and *marvellous* retina ; and again of the organ of hearing, with its tympanum, cochlea, and *cortis* instrument of three thousand streams, &c. ; and he now gives utterance to his view as regards the cause and power under which these organs act. "Matter I define as the mysterious thing by which all this is accomplished." If he said *through* instead of *by which*, he would have been within the bounds of reason and of science ; but in reply to Mr. Martineau, who spoke of a vital principle or power dominant over the material components, Tyndall said : "How is this to be presented to the mind ? Where did it flourish (speaking of the tree) before the tree grew, and what becomes of it, when the tree is sawn into planks ?" Not receiving, as he desired, a satisfactory answer, he concluded that he had dispossessed Mr. Martineau of his former belief, and on this he remarked : "If the power to build a tree be conceded to pure matter, what an expansion of our notion of the potency of matter is implied in this concession."

A few remarks on this assumed potency of matter which Tyndall advances seem necessary. First, then, true science knows no *ifs*. An *if* is a frequent associate and friendly support to ignorance; it is employed as an evasion of Truth rather than for its confirmation, and Tyndall's suggestion, "If we concede a power to matter" is clearly not scientific, and the concession is weakened by the *if*, besides being in itself an unimportant thing; for to concede a power to a thing, is tantamount to an acknowledgment that the thing has it not actually. To concede a power to a thing that has it, is a piece of stupidity. To concede a power to a thing that has it not, is equally stupid, and an utterly worthless concession. Having no power in itself in the matter, how can it concede it? If, then (says Tyndall), "we concede to matter the power to build a tree, what an expansion of *our notions* of the potency of matter is implied in the concession." An expansion of a series of notions may be a very unprofitable business, little advantageous to the cause of truth. What authority, then, has Tyndall, through any notions of his, to concede a power or deny a power with respect

to any existence, animal or vegetable, in Nature?

The mysteries of hearing and vision and the mystery of an acorn, are entirely beyond the intellectual *capacity* of any human being. As man can create nothing, what in a practical, actual sense knows he of creation? Knowledge is power, is a trite aphorism, and want of power implies want of knowledge. Has, then, any man the right to pronounce a judgment on Creation, being utterly ignorant of the first principles of things, and, labouring under a dark cloud of incomprehension, is he justified in denying a First Great Cause, a Creator and Ruler of the universe? Yet with ifs and suggestions, altogether hypothetical, Tyndall seeks to solve the mysteries of Nature; and in his own way and words resolves to "Remove anthropology and cosmogony out of the *hands* of God and a special Creator, and place these *mysteries* in the *hands* of scientific men for solution." At present his power in this direction has no juster claim on our belief than is furnished by an if, and certain notions of a most flimsy hypothetical character. As regards wheat or any other grain he remarks: "Given the

graft and its environment, the purely human intellect *might, if sufficiently expanded*, trace out *a priori* every step of the process of growth, on purely mechanical principles." The same rule, he thinks, governs the planets in their circuits. He states again: "The animal body is just as much the product of molecular forces as the earcorn or the crystal of salt." He further declares that: "The heart, with its valves and the mechanism of the eye and hand, is obviously mechanical, and *animal motion* is directly derived from food, as much so as Trevethyck's walking machine from the fire in the furnace." All that is required to make this perfectly clear, he assures us, "is merely a *simple expansion of the faculties we now possess*." That is, a faculty which at present we are deficient of. But he consoles himself under his present want of knowledge in the following terms: "If the materialist is confounded and *science* rendered dumb, *who else* is prepared with a solution?" We have here an exhibition of ignorance, arrogance, and assumption in an aggravated form; but he still continues to dogmatise thus: "Every meal we eat and every cup we

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drink illustrates the mysterious control⁹ of mind by matter."

The soul of such a man as Tyndall here claims to be the proud and rightful owner of, may be presumed to be located in his digestive organs. It is impossible to conceive a more degraded view of mankind than this, a man truly, whose God is his belly. But he has allies, and Nägeli asserts that "The mind can be looked on as a secretion from the brain, in the same way that gall is a secretion from the liver." Tyndall again: "When we ponder, it is the material brain that thinks;" and Huxley said, "Our mental states, *volitions* and so forth, are caused by motions of the brain molecules; *our wills are not the causes* of our voluntary acts, but symbols merely of modes of motion of the brain." Thus they invent and assign causes to explain effects which are beyond their comprehension as creatures of earth. The justification for their assumptions is based, they say, on the demand of the human mind for intellectual light. In this spirit they invent what may justly be defined as the science of the unknowable; and Häckel, so actuated, remarks, "As investigators of Nature, we are

bound to attempt an explanation, for, failing to discover some explanation, we are reduced to believe in a supernatural miracle, thus renouncing our own reason." But Tyndall himself throws doubt over the power of molecular movements as assumed by the materialists, for he said, "I do not think we are entitled to say that molecular movements and groupings explain everything; *in fact, they explain nothing*, and the connection of body and soul is as insoluble now as in the prehistoric ages." The mystery, then, of Creation clearly remains as insoluble as ever, and so, without doubt, it will ever continue to be. But there are many advanced thinkers, literary giants, and such like, full of self-opinion, who prefer to believe in their own reason before anything beyond its reach; so for one mystery they adopt another. It is easy and agreeable to the human mind to remain in this condition of self-complacency, rather than believe in a power before which the human mind is utterly incompetent to indulge its aspirations and realise its earthly conceptions. Their own views may be false possibly, but they are their own, and that is some satisfaction;

and at this point we find the origin of an inveterate bias, which admits of no reconciliation with any opposite belief.

Tyndall's instruction to his purblind followers deserves notice. To such of them as the gist of his teaching may appear unintelligible, or too advanced for credence, he desires them "not to be deterred from belief by *so trifling a matter*, but if their eyes seem dim, still to gaze steadily into the misty vision until the very clouds weave themselves into definite forms." This tallies with Darwin's direction to his followers. When his teaching does not exactly find any support in Nature, then he says, "*It is well to try* in imagination to give some form or species some advantage over another." True science admits no misty visions or imaginative unrealities, to have and hold a footing in her kingdom. Therefore the instructions in these two instances are illegal and inadmissible, being false to nature and opposed to scientific truths. And I think a remark of Lord Bacon's, or rather an admonition to the material school of thinkers at large, may well apply here. "And now," said he, "I turn to men, to whom I have certain salutary

admonitions to offer and certain fair requests to make. My first admonition is that men *confine the sense* within the limits of duty in respect of things divine, for the sense is like the sun, which reveals the face of earth, but seals and shuts up the face of heaven."

DARWIN AND WALLACE

"NAMES only to be mentioned to be at once recognised as those of two authorities of the first importance, as leaders in the field of science, and that of Evolution in chief. Yet, strange as it must appear, these primary leaders—nay, initiators of the theory—differ widely in many particulars at the very commencement of the scheme. Thus Wallace is of opinion that "man is *somehow* descended, in bodily structure, from a lower animal ; but if this is accepted, what we know points (he thinks) to an evolution widely different from that in which an animal very like an ape and a little like a man has been developed, step by step, into the intellectual being man, as the skull of all skulls, which is the oldest, is a fair average human one." He further remarked most appropriately, "However great the intellectual triumphs of the nineteenth century,

it is far too much to imagine that in less than twenty-five years we have passed from comparative ignorance, to almost perfect knowledge of two such vast and complex questions as the Origin of Species and the Antiquity of Man." He rejected entirely Darwin's theory of sexual selection. Darwin assumed that birds are so beautiful because the females always selected the handsomest males. Not so, thinks Wallace. It is because colour is a sign of vigour, and the females select these, or because the most vigorous conquer their less vigorous rivals.

Here you have two different views regarding the beauty of birds: you may accept either, and find yourself as little enlightened as to the true cause as ever; and on this question of beauty we may fairly doubt Darwin's capacity of forming any just judgment regarding what, in the opinion of a bird or any animal in creation, constitutes beauty. A female toad or spider may think their males beautiful, in defiance of Darwin's very opposite opinion regarding them; but inasmuch as it is the male that selects and pursues the female, shall we be wise in asking Darwin to explain this side of

Nature? It would, I think, be wiser to leave the actions of the lower animals in undisturbed possession of Nature herself, and to decide that the theory of sexual selection is utterly fallacious and misleading. But some of Wallace's opinions, circulated by him as great natural truths, require special notice. Thus, he states as a fact worthy of our belief, a certain notion of his respecting principally the insect portion of creation, and as regards these he remarks that "their colours are fixed or modified by *Natural Selection* for varied purposes; obscure or imitative for concealment, gaudy for a warning that the creature is not fit to eat and therefore not worth killing: special marks, easy of recognition, in order to divert attention from vital parts." By such preposterous remarks as these Mr. Wallace proposes to erase from the human mind belief in an overruling Providence, and would have men believe instead in a power in the creatures themselves to modify and regulate their colour to meet novel circumstances in which they may from time to time be placed; and this they are assumed to do by the *law*, as it is termed, of *Natural Selection*.

tion—a law of a most dubious nature in itself, and in this interpretation of it reducing it still further into the (we might truly say) region of doubt—nay, even of farce—in this particular instance at least; and I trust there are few people so deficient in God-given common sense as to believe in Wallace's theory as regards the power of the lower creatures to alter their natural integuments in colour or structure in any degree under any circumstances that may be novel to them. Wallace himself remarks elsewhere: "The causes of colour are molecular or chemical changes of the substance of the integument." To suppose that the lower creatures can effect these changes at will, under any circumstances, is incredible; yet Wallace advances the power as being a great natural reality.

•On Darwin's method of procedure in order to insure success to his theory, a few remarks are surely worthy of special notice. Thus, to a friend who spoke of a Divine agency operating in Nature, he answered: "I cannot see this necessity; its admission would, I think, make my theory of natural selection valueless. Grant," he adds, "a simple arche-

typal creature, like a mud-fish, *with the five senses and some vestige of mind*, and I believe natural selection will account for every vertebrate animal." Here he admits the operation of a Creator, an agent to him utterly unknown, up to a certain most essential point, and then cannot see any necessity for His further interference in Nature; for the carrying out of which Darwin assumes as all-sufficient his theory of natural selection. Yet surely, if natural selection is a fact, it necessarily ceases to be a theory, and if it is not a fact, no theory can make it so, and the theory should vanish, as all untruths are bound to do; and though Darwin's modesty of assertion is so often mentioned, yet it may safely be assumed that, were natural selection a fact, he would reject as utterly unworthy the title of a theory now applied to it. Then we must conclude that it is not a fact. As regards Nature, Darwin admits a Creator up to a certain most important stage over this earth. It would be right and reverent in us, His human creatures, not to allow His continuous power and providential rule to be superseded by any absurd pretensions of mortal men to any actual knowledge of the great mystery of

creation. It begins in mystery, and ends, as it began, in total incomprehensibility by any creatures of earth. 3,668

But Darwin's speculations on this subject still deserve notice, if not for their realisability, at least for their ingenuity, as the following instance fully bears out. On the question of tails, he remarks : " Seeing how important an organ of locomotion this is in aquatic animals, and its presence and use in so many land animals, which in their lungs or modified swim bladders betray their aquatic origin," so he states as his opinion that " the tail of land animals may *very legitimately* come from the same source and are employed for the same purpose ; thus, as in fish, the tail is used as a rudder and main guide in progression, so also is it employed in some land animals." And he especially notices its action as a main guide for the dog as an aid in progression, especially, Darwin thinks, in turning, though in this respect he thinks its action may be slight ; for he adds, " The hare, with hardly any tail, can double quickly enough." At any rate the tail of animals proves, to Darwin's mind, their aquatic origin.

As we are on the subject of tails, it would be well to notice Darwin's theory of how man is deficient of this ornament. "It is lost to him in consequence of his baboon ancestors, too pertinaciously adopting the sitting posture." This is Darwin's theory, though I believe, as a rule, baboons carefully abstain from sitting on their tails; but Darwin rather indulges in speculations more fanciful than rational, as he himself avows in the following remark: "It is well to give in imagination any creature an advantage over another." Well for what? For his theory possibly, but in what other respect well? Is it not ill, and at variance with truth? What actual light can it throw over an inquiry where facts alone are demanded? But a strong bias is to many minds an irresistible leader; though sometimes notably a misleader. Darwin had a special object in view, and allowed no slight obstacles to obstruct his course. Thus, to one who suggested that some of his statements were not in accordance with Nature, he replied, "Nature will lie to us, if she can." This implies, that when his theory is false, then the error was not in his theory, but in Nature herself, who was bound

to accommodate herself to the exigencies imposed upon her by the superior authority of certain theoretical speculators. And Darwin is not chary in speculating. Thus he dallies with Nature freely, as the following statement, remarkable not for its wisdom but for its singularity, proves : "Some people, but chiefly the very old, have a few hairs on their eyebrows longer than the others." These hairs (in Darwin's opinion) apparently represent the vibrissæ which are used as organs of touch by many of the lower animals. Thus he traces resemblances, inconceivably remote, between mankind and brutes in order to give some shadow of reality to his theory of evolution ; and as beauty in Nature does not fit in with it, he undervalues it and says, "Some are of opinion that it has been created in order to delight mankind ; others think, for the sake of mere variety, such doctrines, if true, would be absolutely fatal to my theory."

Again, to suit his purpose, Darwin assumes that "man's admiration of scenery has *arisen* only in modern times." Yet he thinks "*Beauty* in flowers has arisen solely to attract insects, that thus their fertilisation may be favoured." Query : Did the flowers

make themselves beautiful to please the insects, and is this the sole cause of beauty in plants? His view of the relation between plants and insects is rendered somewhat obscure by this further remark: "If it can be proved that any part of the structure of any species has been formed for the exclusive good of another, it would annihilate my theory, for such could not be produced by natural selection."

Is, then, the beauty of the plant made merely for the good of the insect tribe, by the law of natural selection? or is the special formation of the insect for the transportation of the fertilising pollen made by natural selection? Are not these arrangements of Divine Providence over all natural events, and one of Nature's most beneficent mysteries? Is there any intelligent collusion between the flower and the insect for a special purpose, or does either know the part they perform in Nature's marvellous scheme? Is it possible that any one can be so inconceivably biased as to admit the reasonableness of such a circumstance, or so mentally incapable as to believe it? What an insect thinks beautiful and attractive Darwin doubtless has

no capacity to define, but it is well known that some of the most gorgeously coloured flowers possess no attraction for them. But the actual fact is clearly explained, and Darwin knows no other, has no right to assume the knowledge of any other source of attraction *than this*, "*Ubi mel, ibi apis.*" Any notions that conflict with this are merely fanciful and contemptible.

A few more of Darwin's views may deserve notice. Thus, he observes, "*How inexplicable is Nature on the ordinary view. Why should the brain be enclosed in a box composed of such numerous and extraordinarily shaped bones? Why should similar bones have been created in the wing and leg of a bat, used as they are for totally different purposes? Why should these things be?* On the theory of natural selection we can satisfactorily answer these questions." This seems to confirm Tyndall's high estimation of Darwin, of whom he speaks as the soaring speculator, whose opinion should be taken as itself a dynamic power, an indisputable fact. This soaring tendency he manifests thus: "Pigs," he observes, "have often been noticed with a sort of nozzle, like that of a tapir or elephant,"

and thus a far-off connection is apparently established, at least that is the object in view in mentioning these very unlike likenesses by Darwin. One very simple objection to any alliance between these animals may fairly be urged—namely, *diet*; for the offal the pig delights in, is to the pure, clean-feeding animals mentioned as its allies, a source of utter aversion, forming an insuperable natural antipathy to any union between these creatures.

This innate natural difference between these animals is a fact, the suggested affinity a fallacy, a rational impossibility; at least even a theory most improbable, as improbable as the notion that dogs are the descendants of aquatic animals because both have tails and both use them as guides in progression. But even this is surpassed in incredulity by this speculation thus urged by Darwin: "Hearne saw in America a black bear swimming for hours with widely open mouth, thus catching, *almost like a whale*, insects in the water." This is clearly advanced as indicative of a probable marvellous change as ultimately not impossible. We see in this a resemblance to the well-known case in Hamlet:

HAMLET (to POLONIUS). Do you see yonder cloud that's almost in shape of a camel?

POL. By the mass, and 'tis like a camel, indeed.

HAMLET. Methinks it is like a weasel.

POL. It is backed like a weasel.

HAMLET. Or like a whale?

POL. Very like a whale.

HAMLET (soliloquizes thus). "They fool me to the top of my bent," &c.

Now, without assuming that Darwin means in any degree to gull or make fools of the British public, yet it seems incredible that he can believe what is certainly implied in the recital he gives, that in any possible or remotely conceivable way, the transformation of a bear into a being *almost like a whale* was likely (given any amount of time) to come to pass. It must, however, be apparent that he allows his imagination very considerable latitude, when simple-minded people merely look for, and hope for, scientific and reliable facts. The following case rather proves this. "I can see," said he, "no insuperable difficulty in believing it possible that the membrane-connected fingers and forearm of the *galeopithecus*, might be lengthened by natural selection, and thus, as far as the organs of flight are concerned, would convert it into a bat."

This remark of his, wants further confirmation before being believed in—viz., that the pig, the tapir and elephant are connected by links, not extremely wide apart. Such is Darwin's conclusion. He even compares the eye to a telescope ; and after giving certain *supposed means* and efficient causes in the production of this instrument, he adds; “Let this process go on, for *millions on millions of years*, may we not believe that a living instrument of equal power *might* be produced.” He here gives creative power to his own imagination which, if false, can only beget its likeness. That a dead telescope could ever become a living eye is utterly beyond *belief* by any reasonable being ; both are the creations of design—the one, the only seeing one, of *Divine* power ; the other, the non-seeing one, of *human* intelligence. They certainly co-operate, the latter only as an aid to the former, but in itself, *nil*, as regards vision.

It is needless to quote Darwin's theoretical views, profusely as they are dispensed and full of probable and improbable suggestions, regarding the unknown and unknowable laws of Nature, but the point in which he appears

in the least credible, we may add creditable, light, is in his attempt to deprecate or ignore the action and power of man, on this earth. Thus, of the breeder of dogs, cattle and so forth, he refers to him as an unimportant factor—in very truth, as no factor at all ; for (says Darwin) he brings unintentionally two animals of very different qualities together, in perfect incognizance of the result. He is (according to Darwin) not credited with the slightest foresight, not even with any rational intention based on knowledge drawn from previous experience. He levels his satire with the same relentless force against the human labourer in the vegetable kingdom. He speaks of him as operating unconsciously—in other words, ignorantly—as regards the result of his labour, yet the scientific gardener superintends the construction of the conservatory, the arrangement of the heating apparatus, and the regulation of the temperature ; thus, in the severest winter here, tropical plants are produced in greater perfection than in their native climes, for it is generally admitted that hothouse pines and grapes excel those of tropical growth. All reasonable people are of the opinion that

the credit here is altogether due to the intelligent action of man over the lower creations, both of the animal and vegetable kingdoms, and that in both he selects, rejects, regulates, and, in fact, rules to certain ends the whole.

As it is impossible to doubt the existence of reason, to be present, if not potent, in Darwin's mind, we must conclude that the power of mankind in and over Nature, cannot have escaped his recognition. Yet he comes forward with doubt and denial regarding this patent fact. Such a line of conduct is solely explicable on the belief that an inveterate bias, prevents any contrariant views to occupy his mind. Thus man's selection, man's rule in and over Nature, conflicts most seriously with Darwin's theory of Natural Selection, so facts must give way to theory to suit Mr. Darwin.

But Darwin goes further, in his attempt to prove man a very inefficient factor, and gives the lower animals a prior claim to respect as intelligent beings. Thus, he says, "Man cannot, on his first trial, make a canoe, or a hatchet, but a beaver makes its dam, a bird its nest, as well, or nearly as well, the first

time as when old." On the whole he gives the palm, as regards originality and power, to the lower animals ; and Wallace believes or argues that, " Much of the *intelligent work* done by man is due to *imitation*, and not to *reason*." This remark is neither reasonable nor intelligent, for to speak reasonably, work done by imitation cannot justly be viewed as intelligent work, any more than a copy has a claim to be an original work ; and a thing intelligently executed claims a right to be above a work merely imitative.

A few more selections from Darwin's works are desirable in order to show the tendency of his mind. Thus, he observes : " It seems to me highly probable that any animal with well-marked social instincts, would inevitably acquire a moral sense *as soon as* his intellectual powers had become as well developed, or nearly as well, as in man ; again, *after* language had been acquired, and the wishes of the community could be distinctly expressed, the opinion how each ought to act for the public good, would to a large extent be the guide to action." Another suggestion of his is that " if men were reared in precisely the same

conditions as bees, there can hardly be a doubt that our unmarried females would, like the worker bees, think it a sacred duty to kill their brothers, and mothers to kill their fertile daughters"; and as a sort of corollary to this, he remarks: "With respect to the parental filial affections it is useless to speculate, but we may infer that they are *to a great extent* due to natural selection."

On beards he is very wanting in clearness; so on this point he desires *us to turn to our best guide*, the baboon: "In them we find them equally developed in both sexes *in some* species; in others, most in the males. From *this fact it is highly probable* that they *first* acquired their beards as an ornament. It appears, therefore, at first sight, *probable* that we are descended from a progenitor of which both sexes were bearded, and that *man* has retained his, whilst *woman* lost hers when her body became almost completely divested of hair." He pursues this *notion further*, and remarks: "As far as the extreme intricacy of the subject permits us to judge, our male ape-like progenitors acquired their beards as an ornament to charm the opposite sex, and transmitted them to *man*.

as he now exists. The females were first denuded of hair in like manner as a sexual ornament," and he adds, "as man, or rather woman, became divested of hair (by sexual selection) for ornamental purposes, it is not surprising that mankind should differ so greatly in hairiness from his lower brethren."

On the question of ornamentation he says : "It would appear that *mere novelty or change, for the sake of change*, had sometimes acted like a charm on female birds in *the same way* as fashion with us. "It is *probable*, therefore, that both sexes of many birds have acquired their special plumage through sexual selection." He mentions the capricious way in which sexual selection appears to act, and he notices "the particular arrangement of the feathers in the humming-bird and goosander as proof of this," and this, he says, reminds *him* of the "changes of fashion which we admire in our own dresses." So capricious is fashion in the bird and beast world (if we can believe Darwin); but if so, they have this advantage over our fashionable females, in being (in theory at least) their own dress-makers, and, moreover, manufacturers of their own materials; and as regards taste

they seem near perfection, if we may believe Darwin, who declares: "Birds have fine powers of discrimination, and *in some few instances* it can be shown that they have a taste for the beautiful." As this is the theme of all his previous remarks—namely, the admiration of the females, for the beauty of the males—nay, more, the admiration of the males for their own beauty—this remark that this can be shown to exist *in some few instances* is rather surprising and unexpected; but with respect to sexual selection he *himself states* that the views he has advanced are *deficient in scientific precision*.

What, then, is the legitimate inference to be drawn of such a theory, so *deficient*, but that it is *altogether* false and fictitious? This seems to give countenance to the truth of a statement made at a scientific meeting in London. One member said he had heard that the French Academy had declined to admit Darwin *on the ground that his works were unscientific*. To this a Dr. Bree replied: "Mr. Darwin is stated to have been proposed three times and rejected each time, I understand, *on those particular grounds*."

The French view of man, under Darwin's scheme, is, that as the uppermost product of the theory, his true and only legitimate title, is that of *singe perfectioné*, or a perfect baboon.

The following confession of Darwin towards the close of his earthly career is full of interest. In a letter to a friend he stated that "the sight of the human eye made him shudder, and that of the peacock's tail produced a similar impression on him." Now his argument throughout was to the effect that if anything was created *alone* to add grace to Nature or to please mankind *alone*, then his theory must subside, and hence it followed that two of the most beautiful things on earth excited such a contrary emotion in his mind, for in truth his whole scheme has been sustained by an incessant warfare against original beauty of design, and beauty in Nature as a thing designed *ab origine*; and thus, at last, a feeling of remorse came over the spirit of Darwin, for what other feeling can we conceive as capable of making the strong man shudder? At least this may be taken as a partial reantation and regret for his previous

antagonism to the beautiful on this earth,
because, as he himself often confessed, if it
existed as an established *natural fact*, then
his *theory of Natural Selection* must fall to
the ground.

ROMANES

IN literary and scientific circles, few names hold a higher place than that of Romanes. A record of his views is therefore deserving of special notice. . But let us not be guided by the authority of a name ; let us rather study his opinions, as to their worth or otherwise, by our own unbiased reason. Therefore so let us interpret two lectures of his "On the Genesis of the Human Mind." He commenced in the following rather ambiguous manner : "*Assuming the truth* of the general theory of evolution, as regards the bodily structure and mental organisation in the lower animals."• Surely the assumption that a thing is true, is tantamount to a denial of it, for a fact is above being assumed ; it is in itself absolute truth. But Romanes —heedless, careless, we might almost say defiant, of any obstruction, in his theoretical

pathway — proceeds to speculate concerning the evolution of the human mind from that of the brute. To reach this end he treats his vague assumption as an established fact ; and so grounded, he further expresses his belief that "the process of organic and mental evolution is continuous throughout the whole region of life ; and he considers it very *improbable* that this process should have been interrupted at its terminal phase—namely, at humanity" ; and he demands "very cogent, and unmistakable proofs, against the possibility of animal intelligence, passing into that of mankind, before he will give up his theory on that point." What, then, we are entitled to ask, is the duty of a theorist ? Is he not bound to prove his theory to be true ? and failing in that duty are we not justified in withholding our belief in it ? What more cogent and unmistakable proof of the falsity of a theory can we, or Romanes expect, than its want of proof ? and of whom can this be required in all justice, but to the propounder of it ? Is it not a piece of impertinence to expect other people to trouble themselves about its disproof ? But on the question at issue, is it not generally

perceived, relying on the closest and unbiassed observation of the whole animal creation, that to all and each there is a terminal phase, an appointed sphere of action and intelligence, beyond which no progress can be within their possibility? This Romanes seems partially to admit, but still he *assumes* that the only obstacle to the transference of intelligence from brutes to men is the want of language; and so he asks complainingly, if not defiantly, "Why man alone has been gifted with the *logos*?" He here speaks of man as a specially gifted being, but of the why, or the how, he has no real knowledge; but as respects the brute and language, were he possessed of it, of what advantage to him would it be without reason to regulate and guide it? Would it not be a case of *vox et præterea nihil*? But this suits not Romanes' view, and he asserts that "All our lines of evidence converge to the conclusion that the faculty of speech is alone the ultimate source of the enormous difference between the mind of man and that of the lower animals." Thus reason is made subservient to language, whereas the fact is that the two are special human attributes

possessed by no brute animals. Language is but the servant and interpreter of mind, and without the regulation and guidance of reason it is utterly worthless, unmeaning and chaotic ; and the assumption that the mind of intellectual man, is of brute origin, is heresy against that reason which is the link connecting the world of sense with the world of mind, binding the sensuous and the spiritual in one holy bond ; thus combined, they form an invaluable aid to man. In an intellectual sense, both then are boons of inestimable value to man, both are essential to him in a progressive sense ; their union opens to him a region of truth and light which language alone could never even approximately attain to.

Having given his views regarding the origin of the human mind, we may glance at his view of the origin of instinct. "Animals," he assumes, "acquire instinct by frequently repeating intelligent actions." In support of this opinion he adds, "Just as we ourselves acquire the *instinct* of winding up our watches ;" so that winding up our watches is not, according to Romanes, an intelligent act, but just a human instinct, and further still it

adds proof, he thinks, to his theory of "lapsed intelligence."

Again, he states that, "as far as the *logic of feeling goes*" (whatever that may be) "the intellectual operations of the lower animals are indistinguishable from those of ourselves." In proof of this *he brings forward infants, deaf mutes, and idiots.* These he brings forward as legitimate examples of our intellectual selves. The adoption of these, to suit his theory, must be considered as most irregular, unjustifiable, and even disgraceful, and tend rather to weaken than strengthen his argument. As regards his assertion that animals acquire instincts by often repeating intelligent actions, this seems a cart before the horse philosophy; and as regards evolution, it contains no principle compatible with the ideas of progress, which that theory inculcates.

With respect to the much-mooted question as to whether the brain motion originates thought, or the mind the brain movements, "such discussions have led," he says, "to little else than interminable controversies." Therefore he advances what he defines as a "quite sufficient argument," by *supposing*

them to act simultaneously. Thus neither would be *alone* in action, and this monistic theory would also end a controversy about the freedom of the will, and again show it to be a mere matter of terminology, whether we speak of the brain or the mind as the cause of bodily movement. Considering the arrangement of these questions as adopted by Romanes, we may certainly give him the credit of being an excellent supposer, without granting to a supposition, however ingenious, any higher place than can reasonably be conceded to it, *as a bare supposition*. But, strengthening himself on his supposition, he remarks towards the close of his lecture on Mind and Motion, "If a little knowledge of physiology and a little knowledge of psychology incline men to Atheism, a deeper knowledge of both, and their relations to each other, would lead men *back to some form* of religion, which, if *it be more vague*, would be *more worthy of credence* than that of former days." This partakes of the general vagueness which characterises his views throughout his lectures, for vagueness and want of credibility are everywhere conspicuous. Yet I should

not feel entitled to say that this vagueness rendered his notions particularly worthy of credence; and his own statement respecting his theory of the evolution of the human mind, from that of brutes, speaks more of fiction than of reality in its conception. His statement is: "I cannot say how long it will be before I can feel *justified* in publishing my researches on this question, for the more I have investigated it, the more I have found it grow in three directions—in depth, in width, and in complexity." But in defiance, as it were, of these obstacles, this acknowledged actual ignorance, he says: "On entering so wide a field of inquiry it is *indispensable* to the *continuity of advance* that we should be prepared, *when needful*, to *supplement observation with hypothesis*." When the greater facts of Nature are entirely inexplicable, as they ever are to human comprehension, then to meet this emergency we must be prepared to employ hypothetical, for actual explanations, to supplement our actual and inevitable ignorance of Nature's inner, deeper mysteries, by the assumption of hypothetical knowledge—hypothetical knowledge being, if rightly interpreted, nothing

more than *actual ignorance*, ill-concealed under a fictitious, unintelligible verbal complication, suitable for a bias, but inimical to truth.

HERBERT SPENCER

To approach Herbert Spencer in a spirit of respectful deference would, I am aware, be the proper attitude of an unknown individual; but all men are subject to occasional lapses, and the fact recorded of Homer, that he sometimes slept, or was not always wide awake may, as a rare and unusual circumstance, apply to Herbert Spencer. Thus his materialistic tendency seems at times carried too far, and as regards those who believe in a vital principle and spiritual law, dominant over Nature, and the material world at large. He describes such people as, "Men who have not risen above the vulgar conception, which unites with matter the contemptuous epithets of gross and brute." Now, is not the latter epithet a gross misapplication of language, giving an exaltation to matter far beyond anything it can justly lay claim to?

All brutes possess feelings, appetites, volitions to a certain extent; to assume that matter, *per se*, has any of these qualities, or powers, is absurd; such an aspect is vulgar, unprofitable, and by no means elevating. After dwelling for a considerable time on the discoveries of science, he remarks: "These extend (materially speaking) to the conception much less of a universe of dead matter, than of a universe, everywhere alive, *if not in the restricted sense, yet in a general sense.*" Now, which is the restricted sense, that which limits life to a low material boundary? or that which views it, as obedient to a law, high above matter, and to which matter, however perfectly organised, is absolutely subservient?

Life is restricted to living existences, this principle away, the body reverts to dead matter, lifeless, inert, utterly incapable of renovation, or movement in any direction, but subject to elemental dissolution, from which the vital system alone protects it; but what seems especially fallacious, and dangerous to the highest and eternal interests of man, is his decision against the reasonableness of belief in God. On which he declares that "Such a belief is not possible. Men

may think they believe, but such a belief cannot be actual, inasmuch as the existence of such a being is unthinkable." The question, then, to be decided is, what is thinkable? and what not so? and to Nature we must go in order to obtain a definite answer, an answer reliable, and absolutely rational. Let us then, in illustration, and elucidation, if possible, of living beings in Nature, take an elephant (Grove's elephant we may call it) into our consideration, from the vast field of living existences in the animal kingdom. What then do we actually know of this animal? To describe its exterior is surely unnecessary. It is a huge unwieldy brute, with a remarkably thick integument, a very flexible trunk, and a pair of tusks, of some mercantile value, and here we have a rough sketch of the creature we call an elephant. Some men have studied it further, and know something of its habits, diet, its digestive functions, and so forth; and this we may truly say comprises nearly all we actually know of him. The brute then is simply a phenomenon, and all our knowledge of him is phenomenal, and only so far can we rightly think of him; the same is the position we hold with respect to Nature

at large, through all her varied forms of life, not animal alone, but in the vegetable kingdom as well. To name a few we may adduce as examples : the eagle, horse, horse-chestnut, king-fisher, humming-bird, moss-rose, pine-apple, onion, and so on without end ; all these we know by appearance or phenomenally, also certain special qualities, learnt from experience and observation, and the knowledge so acquired is real, as far as it goes ; and yet in main particulars these living forms are absolutely unknown and unknowable, that is, inexplicable to any human mind, however scientifically illuminated ; all our knowledge is surface knowledge, in fact, superficial ; dive with your scalpel down to the innermost fibres of the heart, and all is outside.

With respect to the inner, deeper secrets of Nature, science gives no clue. Coleridge declared, "The spirit of life is contained in no vessel or organ, yet it permeates all." It is spiritual, not corporeal, mental not material, though manifested in or through the latter, and thus often arises much confusion and misapprehension. As regards Nature, we may reiterate the language of Spencer with

reference to God, we may think we know, but cannot actually do so, because her actual facts are *unthinkable*. Phenomenally we know her, but phenomena are merely outward manifestations of great inner principles, to us unknown, nay unknowable, and therefore necessarily *unthinkable*, and things that are "seen were not made of things that do appear," as the materialists appear to think, under the delusion of the senses, little mind-ful of this ancient aphorism: *Subtilitas naturæ, longe exsuperat subtilitatem mentis humanæ*. With them seeing is believing, forms their argument; there it begins and there it ends, it admits of no discussion, permits no denial, it is a natural fact, undeniable, actual, and it is *in a limited sense true*, but not the whole truth, for our vision is partial, and the perceptions of the senses are also partial, and the knowledge hence derived is also of necessity partial, and the Scripture on this point declares, "We see in part, and we reason in part;" and we are bound in reason to conclude that Nature, in the very highest sense, is incomprehensible, and so in reality altogether *unthinkable*. Phenomena explain not themselves, they,

are but "outward signs of an inner spiritual law," which higher law is to man hid behind the veil. Which, then, is the most rational interpretation of *Nature at large*, taking the elephant as a single illustration out of the vast multitude of living things? An elephant without a creator, or the creator of an elephant? Which is the most legitimately rational thought? What capacity has Herbert Spencer, or any man of earthly mould, to speak with any amount of actual knowledge respecting the origin of any animal here below? Is not the whole question unanswerable, and *absolutely unthinkable*? All Nature then is unthinkable; but a God of Nature is a very natural inference, and in every point of view *most thinkable*. All Nature points to Him; man alone is rebellious, short-sighted, worldly-minded, and too many, are ready to yield to the enemies of their *professed belief*, at the time when they are the paid *ministers* of the Christian creed. An instance of this appeared in the *Spectator* in 1886, in a criticism of a work by the Rev. George Matheson, D.D., entitled, "The Old Faith and the New," which had reached to

a second edition. This Christian minister seems totally unacquainted with the theory, but simply remarks, "Suppose it true, what then? Can the *old faith live with the new?*"

The editor of the *Spectator* remarks, "Dr. Matheson lays the greatest stress on Herbert Spencer's doctrine of force, and the inscrutable nature of force. He refers to it in every chapter, and argues mainly on what is implied in it;" but the editor thinks that the Doctor misapprehends Herbert Spencer's view, who does not admit (as Dr. Matheson says he does) that movement requires a *mover*; on the contrary, he said, "He deliberately chose the word *persistence* instead of *conservation*, because conservation implies a *conserver*." Dr. Matheson says, "The modern evolutionist believes, that matter has no power of its own." Herbert Spencer, on the contrary, declares that "He can interpret all things, as modes of matter and motion. Life is a result of physical forces; it arose out of them, and will vanish with them." On the whole the editor thinks that Dr. Matheson has entirely misapprehended Herbert Spencer's theory of "the persistence of force, and its

inscrutability," and it is evident that religion had no place or part in his speculations. It is surely disheartening to hear a Christian minister speak of a *New Church* and a *New Faith*, and admit the possibility of such a transformation of the Old, as is involved in the unproved theory of the evolutionists. Dr. Matheson appears to be halting between two opinions, which are directly opposed to each other: to believe in one you must reject the other. You cannot be a sincere Christian and an unbeliever in Christ and God in Christ at the same time. Truth admits no halting place and no reconciliation as possible between belief and unbelief. Lilly remarks, "The law of Nature, as far as I can understand it, and as I believe the great Hellenic philosophers understood it, belongs to the domain of the ideal." On Herbert Spencer he remarked, "His is essentially what the French call a *raison d'épicier*, a grocer's intellect. The vision and the faculty Divine, so essential to all philosophy worthy of the name, is not in him, his popularity is an emphatic testimony to the unidealism of the English mind in respect to eternal and Divine

things." The existence, then, of God, a creator and ruler of the universe, is rationally thinkable, and realisable mentally, though He himself, to our feeble human powers of perception or conception, is entirely unthinkable and unrealisable.

HAECKEL

As a man holding a foremost place among the Evolutionists and Materialists, Haeckel's particular opinions require special notice. Thus, his view of Creation (thus delivered) shows the general tendency of his mind. "Old beliefs in Creation [superstitions, according to him] are dying out," and this is his creative code in lieu thereof: "The primitive life organisms were formed *chemically*, by spontaneous generation, at the bottom of the sea," for, he adds, "Nowhere else could the origin of life be explained;" but is this an explanation? Is it not a mere evasion of one? But this is his further definition of his primitive organism: "It is of no definite form, but just a particle of primitive slime," he says. "This assumption is required by the demand of the human mind for causality." He entrenches himself, in

his position, by this remark, "Even *if it is* a mere fallacy, it has this inestimable value, if incapable of proof, yet it cannot be experimentally refuted." What is demanded of an hypothesis is proof of itself, without which it is worthless; its improbability is its own all-sufficient refutation. But Haeckel's theory of the origin of life, has been proved to be a fallacy. Having, then, no actual knowledge, he still advances his scheme regarding life and living things. Thus, he asks, "What conditions could have had so remarkable a result as the transforming a branch of soft worms, into the parent form, of the Spinal Animals?" Here is a question, and here implied ignorance; but he has a theory to meet it. It is this: "We may, *with great probability*, assume that this was effected by the *habituation* of the *creeping soft worms* to a swimming mode of life." For a worm to adopt a new mode of existence is, to Haeckel, a very simple matter; but to Reason the suggestion is weak and preposterous. It is on a par with the theory that giraffes got their long legs and necks by stretching, and frogs and ducks their webbed feet by swimming, and

so forth ; but must not the capacity to swim precede the action ? and must not the requisite organic formation precede the capacity ? To assume the converse is surely no proof of wisdom. Yet Haeckel prides himself on the assumption of creeping earth-worms being expert swimmers, and habitually so engaged, with all-important results. He remarked of Agassiz, who held a contrary opinion, and believed in Creation and a Creator : "Agassiz was gifted with too much genius, actually to believe in the truth of the mystic nonsense which he preached." Agassiz preached the doctrine of design, which was particularly obnoxious to Haeckel, who invented, in opposition to it, what he thought the wiser *Theory of Purposelessness* ; and at this stage, and at this point, it would be advisable to leave him to his own particular fancy, as it is a question, to the outside world, not worthy of consideration.

But the folly and presumption of this philosopher knows no limit, for, to his mind, Nature's mysteries present nothing not easy of explanation ; and the origin of mankind from the ape, is to him especially clear, and this is his explanation of the process : " The

evolution of man from the ape was due to the progress made by this animal in his habits of life. A great step was made in this direction when they gave up the habit of climbing and accustomed themselves to the upright gait; hence came a reconstruction of the spine and pelvis, and special human hands and feet. Then they adopted a change of food, and hence again ensued a change in the jaws, teeth, and the whole face, and *the tail*, no longer used, *disappeared*."

Again, as they lived in society, and acquired *family relations*, the ape's language of mere sounds grew into the language of man. And now we have the change complete from ape to man, in the opinion expressed by this *farceur*. His view of the Theory of Darwinism is this: "The Theory of Darwin is *simply this*. The struggle for existence in Nature evolves new species, *without design*, *just as* the will of man produces new varieties, *with design*." He thus views design and no design as parallel forces, producing equal, nay, identical results. If this is the scaffolding of the theory, how it has come to be such a good-looking edifice

is a rational marvel. Professor Whewell remarked: "What are the habits of thought to which it can appear possible that this could take place without design, intention, and intelligence?" He alluded to the general orderly *system* of Nature and the Universe.

A few more of Haeckel's views may show the state of his mind; thus he declares, as one of the *blessed effects* of Darwinism: "It enables us to substitute unconscious causes, acting from necessity, for conscious purposive causes." We would simply ask how a thing that acts from necessity can be considered the cause of its own action? Then, of the necessity itself, are we not in reason bound to ask, how came it to be a necessity? Surely a purpose, prior to its appearance on the scene, is a just and reasonable conviction. To speak of an unnecessitated necessity, an undesigned contrivance, an uncaused sequence, and unconscious cause, are equally preposterous forms of speech, unreasonable, if not absurd. But Haeckel, on the origin of man, writes thus: "Man begins a cell." To inquirers as to the further proceedings of the cell, he replies, "It must have acted just as a man who founded a colony for a given

purpose." On design he says, "The eye develops, without preconceived design, from a *simple rudiment* in the outer skin covering." If that to his mind explains satisfactorily the origin of one eye, it surely fails to explain the origin of two, acting in strictest unity with each other. Even his theoretical mode of viewing this beautiful law connected with our visual powers must, if he has any mental modesty left, induce him to confess his utter ignorance. But his ignorance is surpassed by his insolence towards the highest and noblest of examples among mankind. Thus, in speaking of the Amphioxus, he stated his conviction that, "The skulless, brainless, memberless Amphioxus, or Lancelet, *being of our flesh and blood*, is worthy of our profound respect, and has a better right to our devout reverence, than any one of that *worthless rabble* of miscalled saints, in whose honour nations erect temples." To worship a Lancelet, or sea-squirt, and to deny a Creator, seems to Haeckel the summit of wisdom.

To quote him further, in order to show his mental temperament, seems unnecessary; but his minute account of the means

employed by his baboon ancestor to get rid of the general hirsuteness of his face, and arrange matters, in getting up well regulated whiskers and beard at the expense of the general hairiness of his face, is infinitely less credible, or amusing, than the narratives of Baron Munchausen and Major Longbow, and, in a man who pretends to talk science, most unseemly. There is, in truth, more of tragedy than comedy, connected with his degenerate and hopeless speculations regarding Nature, Creation and a Creator. But he has, nevertheless, a special religion of *his own*, which the *Spectator* for December 1894 gives some clue to, in an article entitled "The Religion of Professor Haeckel." It commences thus: "Professor Haeckel has no more notion of the attitude of doubt, than the most confident monk of the Middle Ages. He is a dogmatist of the purest water; he affirms almost all that the religious world denies, and he denies almost all that it affirms." His address on *Monism*, one of his *pedantic terms* for the doctrine of the essential unity of inorganic and organic Nature, the latter having been evolved from the former, only at a relatively late period. Religion

(the Roman Catholic, I presume he refers to he designates as, "The adoration of old clothes and wax dolls, and the thoughtless repetition of masses or rosaries;" and, as regards Christ's teaching, "Thou shalt love thy neighbour as thyself," this, Haeckel affirms was *long before* well observed "among the apes and other social mammals." As for the immortality of the soul, he rejects the idea *in toto*, and the notion of a personal immortality he disposes of by this quotation from Shakespeare—

Imperial Cæsar, dead and turned to clay,
Might stop a hole to keep the wind away.

But if man has no principle of immortality in him, yet, says Haeckel, "The cosmos is immortal." This, suggests the editor, "might be a satisfaction to the cosmos if it possessed self-consciousness as a whole." The whole is immortal, *thinks* Haeckel, but man, who is surely a part of the whole, is *alone*, by Haeckel, excluded from the high privilege. Having got rid of Man, Body, and Soul, simultaneously and finally, he introduces to the notice of this poor fleeting creature, Man, something most fit for his *mental* considera-

tion ; having no faith in him as a thing of permanence and power in the cosmos, yet to what other part of the cosmos could he, as a Rational Being, reasonably address himself, however unreasonable the address itself might be ? There is no other part of the cosmos capable of comprehending the meaning of his mind, on any question, reasonable or other, which he might choose to propose.

Then on the immortality of the cosmos, and the religion thereof, he is reduced to consult the mortal being Man. The position seems rather paradoxical ; his address to humanity is in this wise : " The school of the twentieth century will unfold to the youth the wonderful truths of the evolution of the cosmos, the treasures of beauty everywhere hidden therein, whether with the telescope we explore the wonders of the starry heaven, or with the microscope the wonders of a life infinitely small," &c. Blind and insensible have the great majority of mankind *hitherto* wandered through this glorious wonderland, a sickly and unnatural *Theology* made it repulsive as a vale of tears ; " but now it is given to the mightily advancing human mind to have its eyes

opened," &c.; and this is Haeckel's peculiar province to unfold, by his own law of *Monism*. Thus he defines Monistic investigation of Nature as knowledge of the true; Monistic ethic as training for the good; and Monistic æsthetic as pursuit of the beautiful; by the harmonious and consistent cultivation of these three, we effect the beatific union of religion and science.

"The true, the good, the beautiful are thus united into a beatific whole, and these are the three august divine ones, before which we bow the knee in adoration, and to this Triune Divine Ideal shall the coming twentieth generation build altars."

From these remarks of his, we may infer that, previous to Haeckel, the existence of the true, the good, and the beautiful, were unknown to mankind, and therefore we are bound, in fact, to build altars to Haeckel, as their originator, though, in truth, long before he was born, they were special objects of human admiration and infinite respect, and he in his speculations has rather defiled than done them worthy homage; but he seems greatly in the dark as regards himself and his philosophy, and in assuming, as he does, that

Shakespeare was in agreement with him in his views of things. I think the following passage from Shakespeare gives a strong contradiction to this assumption—

Sit, Jessica ; see how the floor of Heaven
 Is thick inlaid with patines of bright gold :
 There's not the smallest orb that thou behold'st,
 But in its movement like an angel sings,
 Still quiring to the young-eyed cherubim :
 Such harmony is in immortal souls ;
 But whilst this muddy vesture of decay
 Doth grossly hem us in, we cannot hear it.

It is clear, then, that Shakespeare believed in a future state, and the immortality of the soul, and that Haeckel had still in him, and preferred to retain, the muddy vesture of decay, believing in nothing higher or beyond. Of him and the class of men like him, Jean Paul thus spoke: "He prophesied that under the rule of science, and human philosophy, this would be the outcome—

Of this world, a world machine ;
 Of the ether, a gas ;
 Of God, a force ;
 And of the future world, a coffin."

And such seems the legitimate inference to be drawn from the hopeless speculations of Haeckel, both as regards himself and his philosophy.

LANGE

No one can have perused the works of this author without being struck with the acuteness of his intellect, the subtlety of his arguments, the sagacity and directness of the reason he employs. So forcible, indeed, is his style, that it seems to carry conviction into the minds of his readers, as far at least as this earth and this man are concerned ; but when such questions as the relation of the spiritual in and over the material world, or the fact of the soul, and a future state of existence are considered, then he *declines altogether* to enter on any examination of such topics ; but asserts, in the most positive manner, that there are no such subjects to be argued about. His intellectual power, his superior sagacity as a rationalist, and his power of conveying conviction to the minds of his fellow creatures, are of a strictly human

cast, and of strictly terrestrial origin, growth, and imitation ; but in order altogether to exclude any belief in a Creator and Ruler of this sphere from the mind, and to reject the idea of design or purpose from any participation in the operation of the material world around us, which our eyes behold, and our general senses inform us exist, and our minds, thereby enlightened, give us rational cognisance of.

In order to expel any higher conception regarding the phenomena we behold around us than the phenomenal things themselves supply, Lange is obliged to resort to very unworthy subterfuges. A further examination of his work will clearly show how far an inveterate bias will lead the mind of so otherwise a precise and luminous thinker. A few quotations from his writings will be sufficient to justify the charge of illegitimate bias which predominates over his judgment of Nature. His remarks on *Reason's self* deserve notice. On this most important human possession, he thus comments : " When men began to admire *the design in the Universe*, especially in the organic sphere, it was Diogenes of Apollonia who identified the reason that regulated the world with the original sub-

stance *Air*." On this Lange remarks, "If this substance had been conceived to be sentient, and *its supposed sensations to become thoughts*, by means of the growing complexity and motion of its substance, a vigorous materialism might have been developed, perhaps more durable than that of the Atomists." On the atomic theory he gives some special views. Thus, according to him, "nothing happens by chance, but everything through a cause, and of necessity ; and this proposition must be regarded as a *decided negation of teleology*, for the cause (Logos) is *but the* mathematico-mechanical law, followed by *the atoms* in their motion, through an unconditional necessity." Thus, he says, "When a tile falls on a man's head, as he is walking down a street, this is regarded as an accident, yet no one doubts that the direction of the wind and the law of gravitation fully determine the event." So it was no accident at all, but only a real event. According to Lange's philosophy, which he thus defines as rationally progressive : "Material hypotheses always offer the greatest prospect of fresh discoveries" (query, fresh hypotheses). He remarks, "Through Newton and Boyle, the

material world machine was provided with a spiritual conductor, and the mechanical and material theory of Nature only rooted itself more firmly, the more one could pacify religion." "By appealing to the Divine inventor of the machine, this combination of faith and materialism has kept its ground down to our own days. We need only mention the pious sectarian Faraday, who essentially owes his greatness to the consistency with which he asserted the mechanical principle through every branch of physics." This amounts to an assertion that Faraday was a hypocrite, although it is well known that he was a humble worshipper and entire believer in the Divine initiator and persistent ruler of the world of matter through all its varied phases. Therefore, this is clearly a case of an unbeliever seeking his likeness elsewhere, but failing, and finding only an image of himself as the outcome of his search, for true honesty is beyond the reach of calumnies, from whatsoever source emanating, which but recoil on their authors.

But to return to Lange, and his views of the material world. We find him thus remarking, "It is uncertain whether matter in itself

has feeling, or whether it attains this, only in the form of organisms, but even in this case, *sensation, like motion, must potentially belong to all matter*; *so thought the ancients*, whose philosophy is preferred by all capable minds to the inadequate attempts of the moderns."

On evolution and development, he remarks: "Kolliker's law, as well as the law which Haeckel propounds, is logically only considered a *so-called empirical law, drawn from certain natural phenomena, whose ultimate causes we do not know*. We may, however, *attempt to form a picture to ourselves of the true natural causes which underlie the law of development, even were it only to show that there is not the slightest reason or occasion to take refuge in a mystical conception*." He approves of Haeckel's idea, that we are to seek in carbon—of course, he adds, in a manner completely obscure to us—for the cause of the peculiar movements which we observe in protoplasm, and regard as the elements of all vital phenomena. Again, on the quantivalence of atoms, he says, "What can or cannot arise is *determined in advance by certain hypothetical properties of the molecules*." He further remarks, "We might

here break off, and compare this plan with the as yet unknown plan of all possible animal forms." He adds, "Whether this be so or not, it will suffice to show that we need not conceive the law of development as anything supernatural or mystical, and thus the chief obstacle to its recognition will be removed;" but he assumes that as the process is something *to us*, as yet quite inappreciable, this justifies the man of science in not concerning himself with it. This remark is based on an opinion of Haeckel's regarding development from the egg, which he attributed to a chemical cause; but still, in answer to this assumption, Lange remarks, "What first gives the impulse? What makes the materials *so arrange themselves?*" &c. In vain does chemistry grope for an answer; however, he adds: "We must admit that *unknown peculiarities of matter, probably chemical, may exercise* a decisive influence on the development of beings, on their future form and their modes of life, though these peculiarities *are not cognisable by us.* Yet though there is much that is hypothetical and doubtful in the doctrine of development, this *does not lessen its value, inasmuch*, as if the preva-

lence of a mystical power is accepted, we should have, in place of an *imperfect, but real understanding*, only a classification of phenomena by empty notions and gross anthropomorphic phantasies." On natural adaptations in general, he says, "They proceed from the conservation of relatively fortuitous formations, but these can only be called fortuitous, so far as we can only assign no reason for them." Surely here is vagueness enough to make us view the whole as descriptive of what might truly be entitled, "The science of the unknown and unknowable."

It is surely unnecessary to make further extracts from his works in order to show the strong, most ill-conceived and ill-supported bias by which Lange has aspired, in vaguest methods, to dispossess the minds of his fellow-creatures of any belief in a Creator, or what he is pleased to think and describe as "a Mystical Power." Yet it is undoubted that the man who cannot perceive through all the facts of Nature a mystical, that is, an unknown, power at work, must be a mental Myope. "Eyes have they, yet see not." Let science run its normal course, reach the highest, proudest possible goal as far as

actual facts are concerned, and religion and knowledge so acquired will meet in full and indivisible harmony, in very truth become one, united in a perfect sympathy of thought and action; and of this, this is Emerson's view: "Nature always speaks of Spirit, it suggests the absolute. It is a perpetual effect, and he is the happiest man who learns from Nature the lesson of worship." Goethe says: "All forms have a resemblance, no one is the same as another, and their chorus complete points to a mystical law." This is directly opposed to Lange's view of Nature and her processes, and his utter rejection of a mystical power or law as in any respect engaged in Nature as we perceive her.

OTHER MEN AND OTHER MINDS

HAVING recorded the opinions of men eminent in the literary and scientific world in support of their special views regarding Nature and the laws under which she exists, I propose now to record the opinions of equally eminent authorities which point in an opposite direction—the one looking on this world from a material, the other from a spiritual standpoint. Thus, in fact, their views are entirely antagonistic. The Materialists have uttered theirs, now let the Spiritualist state his own views, and labour to demonstrate how far those of the Materialists are based on *Nature* herself, and how far on mere human speculations regarding her; indeed, their object is to discover how far her facts and their theories accord.

It will be well to commence this investiga-

tion with some casual remarks, which are spiritual, or speak only of spirit. This is illustrated in the philosophy of the Hindoo on *law divine*. "It is without name or colour, or hands and feet, it is all and knows all things, it hears without ears, sees without eyes, moves without feet, and seizes without hands." This language is simply expressive of a power which is to us a profound mystery, to which our own methods of thought and means of action give us no clue. But Darwin rejects all mystery, his philosophy is of the true Topsyite order, who allowed that God made her at first, but when asked about her subsequent development, replied, "I guess I growed." Sir Thomas Browne had a theory of quincunxes, on which Coleridge remarked : "A man, once resolved on ideal discoveries, seldom searches long in vain. He finds his favourite figures in everything, in heaven above, and the earth below, in tones, in optic nerves, in roots of trees, in fact, in everything." Now, is not Darwin and his theory here aptly prefigured ? Professor Mivart gives convincing testimony to this in the following passage : "Darwin, in his 'Descent of Man,' discusses his subject with

a habit of assuming as true the very point to be proved. This habit is not singular, it is general, and pervades his whole work; it dominates over all the ifs and probabilities which are so profusely and persistently employed by him, transforming these by a mystical process [all his own] into indisputable verities." Similar remarks are not infrequent. Thus, in the *Edinburgh Review* appeared the following: "Having pointed out that this conjecture is not impossible, and again another not impossible, Darwin decides that the result of these possibilities is established truth. Thus his reasoning rests on the simple postulate that a certain number of not impossibilities constitute a certainty; therefore his reasoning is a striking monument of cumulative yet baseless conjecture;" and a German savant remarked: "Darwin has proved none of his theories, he has merely wrapped them up in facts, which is not quite the same thing."

I may here mention certain curt yet forcible remarks by eminent men on the question of Evolution and Materialism. Thus, Carlyle defined it as "a Gospel of dirt." Agassiz, "Mires of mere assertion." The *Times*

mentioned it as "Complicated guesswork." Disraeli spoke of it as "Revelations from chaos," and many periodicals and persons spoke in similar disparaging terms regarding it. Even Tyndall said: "In more senses than one, Darwin had drawn heavily upon the scientific tolerance of the age; he has drawn heavily upon time in his development of species, and he has drawn heavily and *adventurously* in his theory of pangenesis." This looks like censure, but Tyndall adds: "If any doubt exists as regards his theory, it ought to be given in favour of Darwin, for to such a mind a vast possibility is in itself a dynamic power." So when Darwin theorises, no further confirmation is required of its truth than the dictum of this *soaring speculator*, as Tyndall calls him. A quotation from the *Edinburgh Review*, on Renan's Antichrist, seems applicable here. It was as follows: "Renan, though he is great in history, is hardly an historian, still less, though he delights in theology, is he a theologian; he is first, and above all things, an artist; the skill with which he can weave together, out of legends, inscriptions, memorandums of travels, scraps from the Talmud, histories,

coins and fragments of *all sorts*, a beautiful and consecutive narrative is really beyond all praise, but it must be remembered that, with all the graces of a consummate artist, he also combines the faults which beset all merely artistic representations : it is subjective rather than objective, and seeks to throw the mind into a certain state ; it is careless of presenting facts as they really are ; but it groups, it extends, it concentrates, in short, *it is not reality, but art.*" The characteristics of Darwin's work present a strong similarity to the above ; thus, in his scheme of Evolution, &c., may we not say he is great in theory rather than in facts, great as an artist, careless of patent truths ? He groups, extends, modifies, and concentrates in all these directions ; he is distinctly artistic, he gives a meaning of his own to what he perceives, and weaves the presentations to sense into a web formed out of his peculiar *bias*, and *suited to his theory* ; in truth, all he perceives is made to fit into a foregone conclusion : invention and imagination are persistently called on in support of theories which are mainly indebted to *them* for their existence at all. Thus, he is great in knowledge of Nature, yet scarcely a natural

historian ; he throws his obscure mantle over her, so that she no longer appears as Carlyle defined her, "The living and visible garment of God," but as a misconceived, misfitted, illshapen idol set up in her place. The French Academicians refused to admit Darwin to their circle on the plea that his works were not scientific ; they desired a man of facts, not hypotheses.

Dumas, on the theory, remarked: "Modern Materialism, reviving the formulas of Epicurus and Lucretius, regards the world as the result of a fortuitous arrangement of atoms, man as the highest form of the natural evolution thus evolved ; life the spontaneous modification of force ; birth the beginning, death the end of a phenomenon." Professor Clifford, a general unbeliever in anything higher than humanity, remarked : " Man made a corkscrew for a purpose, but no one ever made the lungs for the purpose of respiration ; " and Huxley, on this question, seems of opinion that " the physical processes of life are capable of being explained *in the same way* as other physical phenomena." According to this, a lifeless corkscrew is a thing intelligently conceived and designed,

but no such first and intelligent design, is conceded to the author of the lungs ; nor even to the living being, on whose life the function entirely depends, the main principle in both being altogether ignored. The lungs truly are a wonderful mechanism, but the wonder is not so much in their mechanism, as in the relation they hold to other important organs and functions to which their mechanism has no actual affinity. To suppose that these sympathies are not due to an intellectual purpose, prior to their establishment, is as little a mark of wisdom as to deny the fact—known to all men of science—of such relations existing at all. Admitting then, that the human fabric, as a whole, is a mechanism, yet it is not mechanical ; that is, not obedient to any laws of mechanics, of which we have any cognisance.

The comments of certain men on this question, of undoubted intellect, are deserving of special notice. Lord Brougham's opinion was that, "The sceptical or free-thinking philosophers always lowered human nature as much as possible ; they regarded it as something gained to their arguments against religion if they could show the difference to

be slighter than is supposed between men and brutes ; they appear to aim at a constitution of the universe without the hypothesis of Deity." Ruskin challenged the teachers of Materialism to tell him how a bird flies. The reply was, "We take a bird, pluck it, and partly skin it ; we then make an incision down to the wing-bone ; the ligament at the joint is then pulled up and out, and is shown to be distinct from the other ligaments, and that is the way the bird flies." And so Mr. Ruskin observed, "On that point it is thought we have been told enough." Mr. Ruskin asked for some cause, some law, and this was all the information they could give him. He then speaks of pigeons and the beautiful iris which the pigeons' necks manifest, as one of those things of which science can give no explanation. Froude, struck with the retrograde religious spirit of the age, asks, "What is the meaning of so strange a phenomenon? Is the progress, of which we hear so much, less real than we thought? and does knowledge grow more shallow as the surface widens? Is it that science is creeping like a snake upon the ground, and bringing forth Materialism?"

He then refers to the diminished clearness and confidence of divines as one cause of the religious vacillation that exists. But it is desirable that some positive examples should be given of the futilities and false positions to which an unregulated bias will lead men. Thus, on Darwin's theory of coral reefs, the Duke of Argyll remarked, "It was almost universally accepted, and for twenty-five years remained unquestioned; but, after a lapse of thirty-five years, science found the theory was but a dream of Darwin's. The cherished dogma had been slowly dropping out of sight, yet his admirers exclaimed, 'Is it possible that Darwin can be wrong?'"

Another theory of even greater importance has lately turned out an utter fallacy. "A slimy mucus first arrested the attention of certain scientific specialists; this they decided to be the substance of which the lowest animals were formed." "Here," remarked the Duke, "was a grand idea; the ultra-Darwinites were enchanted; Haeckel clapped his hands and shouted *Eureka*; even the cautious Huxley was caught by this new and grand discovery; a fine Greek name was devised for it, and it was christened Bathy-

bius." Such was received as an indubitable fact for a certain period, until a young assistant to a chemist poured a quantity of spirits of wine, into a bottle containing some sea-water, when lo! the identical Bathybius resulted, it being, in fact, merely a chemical compound, produced by the action of alcohol on sea water. "Thus the Bathybius disappeared from science, reading us, in more senses than one, a great lesson." The Duke further remarked, "What enthusiasm sprung from the discovery." "It is fine," said the Materialists, "to find missing links in theory, but infinitely better to find the primordial source out of which all life progresses." As regards this Bathybius, were it not for the accident aforesaid, there is not a shadow of doubt, but that it would now stand *in loco parentis*, to all the beings at present existing, holding a place considerably higher than Huxley's protoplasm. On this point *Punch* wittily and wisely said, that, notwithstanding the failure of the Bathybius, Huxley seems cock-sure about his old friend Protoplasm. "And yet," adds *Punch*, "we cannot share his honest pride—

A doctrine oft miscarries;
His protoplasm may be ranked beside
Our old friend, Mrs. Harris.

• The following comment on Bishop Temple's Bampton lecture appeared in the *Times*: "The Bishop accepts the explanations of Laplace and Darwin on Evolution and Life almost in their entirety. On the miracles recorded in the Bible, especially that of the Resurrection, 'he thinks they may be in accord with Nature, but with a law with which we are at present unacquainted.' Thus he seems to reconcile to himself his unbelief in that which he professes to believe, and is richly paid to teach—a man honoured and apparently respected, for what?" The Editor remarks, "Bishop Temple is courageous; he makes Divine, yield before human authority; when a Divine mystery comes in his way, he prefers to believe in the authority of science, whereby to measure how far it is worthy of credence, or how far incredible." Huxley, under a similar inspiration, remarked, "We demand the banishment from all regions of human thought, of what are called spirit, or spontaneity." I lately read this remark, "Scepticism is in the air. The efforts to sap the supernatural basis of Christianity are various, and some proceed from distinguished divines. A worship of science has succeeded

to the distrust in which it was held a few generations back." The Evolutionists claim Goethe as an ally, but his remark on heredity seems to contradict this. Thus, he defines heredity as "the tendency which constantly aims at maintaining uniform the organic forms of the species in the series of generations." Professor Virchow, a leader in the scientific world, made this remark, "I should not be alarmed if proof were found that the ancestors of man were vertebrated animals." This seems an incredible, almost discreditable, remark, after *this* statement of his at a meeting of physicians and naturalists, *previously* held at Munich: "You are all aware that I am now specially pursuing the study of anthropology, and am *prepared to believe* that man had ancestors among other vertebrates; but I am *bound to declare* that every positive advance we have made has actually removed us further from any proof of this connection. Every increase in our possession of objects, fossil or other, which furnish materials for discussion, has removed us further from the hypothesis propounded." Is not this proof sufficiently convincing of the fallacy of the idea, from its first conception, to what ought

to be its last appearance on the field of argument. Only an unconvincible bias, or a weak desire to keep on friendly terms with the men of *advanced thought*, can explain Virchow's adherence to a theory so clearly disproved.

RECAPITULATION

I HERE propose to notice some remarks of leading Evolutionists, which I have so far omitted ; and a further view of Darwin himself on the origin of man is desirable, thus he asks, "Where was the birth-place of man ?" this he thinks was "clearly the old world, but not Australia." He thinks it "more probable that our early progenitors lived on the African continent, but the period and place, whenever and wherever that may have been, when man lost his hairy covering, he *probably* inhabited a hot country." Wallace opined that, "the convergence of the hair towards the elbow in the orang *serves to throw off the rain.*" Darwin concludes from this, "That the hair on *our* arms offers a curious record of our former state," his reason why, being, "*because no one supposes that it is now of any use in throwing off the rain.*" On Links he

remarks, "All these breaks merely depend on a number of related forms which have become extinct," and on this hypothetical view of Nature and her living forms, he states his opinion that "Those remarkably eccentric creatures, the Ornithorhynchus and Echidna, *may safely be considered* as relics of a much larger group," but at the same time he confesses that "in the consideration of the genealogy of the mammalia and man, obscurity becomes heaped on obscurity, but by ingenuity and knowledge much may be done towards extracting *out of* this *obscurity* a doubtful luminosity." In these extracts we find probabilities enough, and doubts and assumptions vague enough, to invalidate any theory, but to a strong bias they seem important, and sufficient to meet and conquer all opposed views; for instance, in spite of any obscurity, Darwin says, "Man apparently diverged from the catarrhine stock." *Apparently*, that is, not actually, for had it been an indisputable fact, Darwin was far too clever to use the word apparently, and here, I think, we may justly affirm that his whole theory is mainly based on the apparent, in contradistinction to the actual; but he says,

"If you wish to know what *ingenuity* and knowledge can effect, you may consult Professor Haeckel's works." Then, with the sanction of Darwin, let us try and discover what wisdom is to be found in this professor. Ingenuity of thought, unless it takes a wise and legal direction, must necessarily be false. He then adduces a fact, on which perfect reliance should be placed, as a support to the theory of evolution—viz., the fact that, "In the earliest stages of uterine gestation, male and female embryos present an *apparent* structural identity," but how does this strengthen the theory? They seem identical, but does he mean to affirm that this identity is anything more than apparent, an appearance which really conceals an absolute difference? With reference then to this apparent structural oneness, we would ask any unbiased human being if he can doubt but that a mysterious fact was at the root of this mere semblance, a fact quite unappreciable by our senses?

Let us consider the case of twins in the human family, or multiple births in the lower animals, where the offspring of one birth are of different sexes, and ask what the most

accomplished naturalist, or theorist who deals with the great mysteries of Nature, as if it were all perfectly clear to his comprehension, what can reasonably be surmised in explanation of this mystery? Can we fail to perceive and know, in all reason, that a supernatural power, an agency inexplicable by any knowledge we now possess, or can reasonably hope to acquire, rules the whole process? It has the appearance of a chance event, yet it is doubtless obedient to a law, whose full comprehension, though beyond our ken, it is folly to doubt, and presumption to deny, and it affords a convincing proof of the utter fallacy of Mill's principle of refusing to believe in anything "the evidence of which was insufficient to satisfy the demands of science." Well, science is here at fault, and mixed births of males and females are of every day occurrence; there is an apparent identity, but this further fact connected with them, that at a certain period further on, these apparently identical forms emerge from the womb organically and sexually divergent, and destined to fulfil certain functions in relation to each other. Can any reasonable being hesitate to believe that all these things

were foreseen, and in progress sure, at the very time that Haeckel and Darwin, *judging by sight alone*, could see nothing but an identity?

A celebrated naturalist gives the following account of his experience. He had collected a variety of embryos of different animals, placed them in bottles and labelled them, but on changing their arrangement, or rather their shelves, the labels of two of his specimens had fallen off and were lost, and he found in the specimens themselves nothing by which they could be distinguished, he therefore was reduced to label them at hazard; yet he knew, and we all know, that though the visual identity was perfect, the destiny of the two forms was entirely different, proving that our senses are not final as regards the truth of things, but may often lead us far away from truth. With respect then to the embryonic *vision*, as it is generally and correctly called, and which I believe originated and still forms the basis of the theory of evolution, the following suggestion may possibly appear not altogether wide of the mark: the argument is, that to every embryo throughout the whole range of

Living beings (whatever the changes they may pass through in the womb) there is a special end where closes for ever the transformation scene; thus the embryo of dog stops fully and finally at dog, whilst that of man, in defiance, as it were, of any apparent visions of identity, passes onward through manifold transformations until it reaches its final and complete human character; so it is with every specific thing of life, its form, its destiny, and function, is prearranged, and this fact is not disproved by any transient outward semblances. This seems a true interpretation of what transpires in the womb. The embryo of a dog, for instance, goes through a series of transformations, from beings lower than itself in the scale of life, but eventually the stop is absolute, complete and final at dog; the limit now reached is also absolute, complete and final, an insuperable barrier is now raised against further change, and a line of demarcation set between it and other beings of different genera and species.

The true interpretation of the embryonic vision seems clearly this, that through and over all the changes we behold, fixed law predominates, and the likenesses which pass

under our review are but transient images, ever changing, until the perfect end is realised ; we are then fully justified in saying that the likenesses we beheld were, as regards actuality, nothing more than illusions of the senses. The *results* of the law prove the law and *not* its transient manifestations, which in some minds tend to disbelief in any law. The poet expressed a truth when he wrote these lines :

All Nature is but art, unknown to Thee,
All chance, direction, which thou canst not see.

What, then, does the embryonic vision actually present to our notice?—an evolution, or a series of evolutions truly, but something beyond and more actual ; it demonstrates especially a limit to evolution, an evolution culminating in a perfect being, and *as stable* as perfect, possessing in himself the seed of his likeness, nay, of his very self, *in perpetuo* ; this is a limit which no reasonable being can deny, or theory override.

In the "Vestiges of Creation" occurs this passage : "At one of the last stages of his foetal career, man exhibits an inter-maxillary bone, which is characteristic of the perfect

ape, *this is suppressed*, and he may then be said to take leave of the simial type and become man." This is advanced in support of evolution, whereas it clearly points to an arrest of it, *as regards the ape*. Darwin himself advances a case *in support* of his theory of evolution which rather tends to disprove it. His case is this: "At a late stage of the human embryonic existence, the thumb bears the exact baboon characteristics, *this is passed over* previous to birth and the perfect human member supervenes." Is it not the rational inference that this end was foreseen and predetermined, before foetation was, nay before conception was, nay even before the appointed relation of the sexes was actually in force; from this we may reasonably conclude that all Nature is made up of parts, and that for each part down to the earliest cell formation there is a law as specific, and as little within the scope of human explanation or comprehension, as that of the most complexly constituted being man. Darwin declares that the embryos of man and dog—he himself selects the *comparison*—at a certain period of uterine gestation are to appearance absolutely identical; but every

one knows this identity is fallacious, infinitely deceptive, and utterly misleading; for the evolution of the two is totally distinct, a gradual process of change at the very moment *when nothing but identity was perceived* was *imperceptibly* in full operation. What, then, do we learn from vision but its nothingness? What to think of a theory based on our perceptive faculties mainly, if not entirely, but that it is at best illusory? As regards the embryo, it is the end and not the transient images that are enlightening; “*finis coronat opus.*” Thus, paradoxical though it may appear, the end is before the beginning, being the realisation of the original design, which is thus expressed by a Latin writer—“*Finis est primum in intentione, ultimum in executione.*” It is the crowning of a conscious purpose, in which the end was included from the first, and as this truth presses itself on us—“the end of all things is in the hands of God,” comes to us as conviction. As the embryonic vision seems a main centre, if not the actual origin, of the theory of evolution, to which certain men point, as a reliable source, from which they draw their conclusions, it is then no light or useless

proceeding, to analyse their views, and try to discern what measure of truth there is in their speculations; where there is some feasibility in them, or where they are entirely visionary, and far away from the actuality of things which Nature, pure and undefiled by vague theories, offers to the minds of the intelligent portion of mankind.

With this view, I have dwelt long and doubtless tediously, on the relations which literally subsist between the embryonic vision and the theoretical speculations of the evolutionists. To continue this inquiry, into the materialistic, evolutionary, I may truly say visionary interpretations of the laws of Nature, seems an interminable business, but an irrational bias is the prominent characteristic apparent throughout their conceptions of Nature. It would then be tedious and unprofitable to give a detailed account of Professor Balfour's manufacture of the organ of vision. He first "supposes" *a spot* on the surface of some very simple organism to become pigmented; now we may suppose the transparent layer of skin above the pigment spot to become thickened so as to form a kind of lens, which would throw an image of

objects on the pigment spot; *in this way* a rudimentary eye might be evolved. To this, he adds, "We may picture to ourselves a series of steps, by which the simple eye, the origin of which I have traced, might become more complicated." Surely no one, whose reasoning capacity is not altogether lost, can believe such trash, as is here presented to his notice, under the fallacious guise of fact and science. Professor Clifford's view of the marvellous in Nature, is thus simplified by him. "Man," he asserts, "made a corkscrew for a special purpose, but no one ever made the lungs for the purpose of respiration." On the whole, the materialists deny the presence of any preconceived idea, or prior design in the perfect, beautiful and persistent order of Nature; and for conscious purpose, they adopt (according to Haeckel) the blessed principle of Darwin's own discovery, "that of unconscious causes acting by necessity;" or again they rely on the principle of a "fortuitous concurrence of atoms," on which Tyndall thus declares his full belief. "Suppose a planet, carved from the sun, and set spinning on its axis, revolving round the sun at a distance equal to our earth, would one of the

consequences of its refrigeration be the development of organic forms? I lean to the affirmative, for who," he adds, "can set limits to the play of molecules in a cooling planet." This and Haeckel's assertion, that "Life originated, *spontaneously*, by *chemical action*, among certain particles of slime at the bottom of the sea," may be advanced as specimens of the theoretical powers of their authors; and *this remark* of Lange seems to agree with that of Tyndall, "What can, or cannot arise, is determined in advance by *certain hypothetical* properties of the molecules." On adaptations in Nature, he remarks, "They proceed from the conservation of relatively fortuitous formations, but these can only be called fortuitous, in so far as we can assign no reason for them!" From this it is clear that the word fortuitous is only used as a cover to actual ignorance, which, however, it absolutely exposes. The state of mind under which the Materialists, the Agnostics, and men of their school develop their systems, is deserving of some notice. Thus Heine said, "We have grown out of deism, our latest philosophers have proclaimed thorough atheism, as the last growth

of German philosophy !” Schopenhauer said, “ No one who really philosophises can be religious.” Then what said Kingdon Clifford : “ The dim and shadowy outlines of the superhuman deity fade slowly away, and as the mist of His presence floats aside, we perceive with greater clearness the shape of *a yet grander and nobler figure*, of Him who made all gods, and will unmake them ; from the dim dawn of history, and from the depths of every soul, the face of our Father ‘Man looks down on us with the fire of eternal youth in His eyes, and says, ‘ Before Jehovah was, I am !’ ” Goethe, on human greatness, held quite a reverse view to Clifford. Thus he wrote as follows, as if for Clifford himself :

As wondrous now as on Creation’s day,
His stamp the little earth god changeth not,
A little better life he’d lead, poor wight,
But for thy gift, a gleam of heavenly light,
Reason he calls it, and doth use it so,
That e’en than brutes more brutish he doth grow.

Huxley, after dwelling long on the mechanical principle inherent in Nature, declared, “ He himself would be content to be a kitchen clock, provided he kept correct time.” To this he added, “ The love of God, and aspirations after beatitude in a future state, are simple

waste of time, if not worse, and are fit only for lunatics." Hume, a reputed atheist, remarked on the contrary: "What a noble privilege is it of human reason, to attain to the knowledge of the Supreme Being, and from the visible works of Nature to be enabled to infer so sublime a principle as its supreme Creator." A writer on Hume remarked, "What he cuts the ground from under, is an atheistic theory of knowledge; what he leaves no room for, is the modern bastard agnosticism, which accepts the physical order and rejects God. How different is this to Huxley's low view of himself, and of higher things than he wots of."

To examine the Materialist's view of creation further seems quite unnecessary, but with reference to Balfour's eye manufactory, a quotation from Coleridge seems applicable. He was speaking of the transient nature of our corporeal systems in general, and he selected the eye as an example: "Detach this organ," he remarks, "from its connection with the living frame; look steadily at it, say it were the eye of a murderer, or the eye of a patriot, behold it, handle it, with its various

accompaniments of tendon, ligament, membranes, blood-vessels, glands, and humours, its nerves of sensation and of motion, and ask yourself, is this cold jelly the light of the body? is this micanthropos in the marvellous microcosm? is this what we mean, when we describe the eye, as the telescope and mirror of the soul? Alas!" he continues, "all these names, like that of the organ itself, are so many anachronisms, figures of speech, to express that which hath been, as when the guide points to a heap of stones, and informs the traveller, this is Babylon, that is Persepolis." "Pursue the same inquisition," he remarks, "with every other part of the body, and you get the same reply; herein consists the essential difference of an organ from a machine, that not only the characteristic form is evolved from the central *invisible power*, but the mass itself is acquired by assimilation." This he illustrates as follows: "The germinal power of the plant transmutes the air and the elementary base of water into grass or leaves; and on these the organic principle in the ox or elephant exercises an alchemy still more stupendous; as the unseen agency weaves its magic eddies,

the foliage becomes indifferently the bone or its marrow, the pulpy brain or the solid ivory; that which you see is blood or flesh, is itself the work, or shall I say the translucence of an invisible energy, which soon again surrenders them to inferior powers, for there is no pause or chasm in the activities of Nature. These are not conjectures, fancies, or hypotheses, but facts; not to reflect on which is ignominious, to deny which is impossible; and we need only reflect on them with a calm and silent spirit to learn the utter emptiness and unmeaningness of the *vaunted mechanico-corpuscular* philosophy, with both its twins, materialism on the one side, and idealism, rightlier called subjective idolism, on the other, the one obtruding on us a world of spectres, the other a mazy dream."

I have made this long and interesting extract, principally in order to place in the insignificant light it deserves, Balfour's eye manufacture, which wanting the principle of life, would be as incapable as the suggestion in which it originated. But what is true of the eye, is true of every other organ of the body; when life ceases, the function ceases,

the organ immediately ceases to be of any use or worth, no more purposeful than a clod of earth, and dust to dust, ashes to ashes, is the end of the great mystery of life, as regards the bodily frame of man.

The following extract from the *Times* of September 6, 1895, seems to deserve special notice ; it refers to a work by the Rev. G. Henslow on "The Origin of Plant Structures, by Self-adaptation to Environment." He contends that natural selection plays no part in the origin of plant structures, whereas the Darwinian theory assumes "that plants, when they vary, do so *indefinitely*, and then the environment (metaphorically) selects the best fitted to survive," but Mr. Henslow assumes that the environment does not, in any sense, select, but induces the plant to form definite, not *indefinite*, variations in Nature ; and he cites Darwin himself as admitting, that if this is so, then natural selection is not wanted at all. And Romanes remarked in a letter to Mr. Henslow, "If you can prove that *indiscriminate*, that is, indefinite variations have not occurred in wild plants, and only under cultivation, you would destroy Darwinism *in toto*." "This," said the editor, "is what Mr. Hen-

slow claims to have established by tolerably complete proof, but," he adds, "*non nostrum est, tantas componere lites.*" But Reason can claim such a right, and such a power, and in reason we can assert that the terms, indefinite and indiscriminate, when employed with reference to natural events, are most objectionable, in fact unmeaning, for Nature's work is always *definite*, and she carefully discriminates and selects, and apart from her, there is no power of selection admissible, except that of the Divinely appointed being, Man ; with respect to the power of environment, which Mr. Darwin suggests as at least somewhat feasible, we can quote this remark of Voltaire, as fairly contradictory to it, "Matter nor circumstance are masters, but God alone."

SUMMARY

HAVING in the previous pages given close, nay, literal quotations, from the opinions openly announced by men of the highest eminence, scientific, literary, and I may add, social, on all the absorbing questions of Evolution and Darwinism, wherein are represented views directly opposed ; where arguments pro and con are discussed, and an irreconcilable difference generated, as irreconcilable, as yea and nay must ever be, thus leaving our conceptions of Nature in some ambiguity ; yet the interpretation of her must ultimately be decided by the pure reason of mankind, devoid of all preconceived notions regarding her ; earth-born, self-born, and circumscribed to self, and earthly things and powers. To the Author of our Reason our reason should be devoted, and our intellects directed : but this view is clearly not

entertained by the school of the so-called Progressists, Evolutionists, Materialists, and other branch institutions of the school. Yet timid whisperings are afloat, unfavourable to their speculations, which, under the denomination of science, regulate their somewhat dogmatical decrees ; some confirmation of this may be found in an article in the *Daily Chronicle*, October 23, 1893, the subject being a criticism of a work by Sir William Dawson, entitled "Some Salient Points in the Science of the Earth."

This volume, says the editor, possesses a melancholy interest, being the deliverance of a victorious worker on the most important questions of Geology, of a man conversant with the giants of the last generation, who in the heroic age of geological science piled up mountains, on which their successors are privileged to stand. With respect to the work under criticism, which consisted of a series of essays, this remark occurs : "When we glance at the names of naturalists, to whom they are directed, we know what to expect. All of these giants are dead, and the views held by most of them are fast getting antiquated." This is clearly a one-

sided view. There are giants privileged and heroic ; and giants antiquated and powerless, according to the particular fancy of students of this class of existences. The *Daily Chronicle* takes one side. This, therefore, is necessarily that which, in his view, is the right, and yet there are two points of view, and giants on both, as is admitted by the editor. In matters of fact, the editor considers Sir William to be perfect, *and that is all* ; for when he begins to reason or deduce conclusions, almost inevitable, from them, it is notorious his inferences are seldom anywhere near the mark. The criticism continues thus : "He stands almost alone in rejecting evolution in any form—Lamarckianism, which is again beginning to look up, and Darwinism, of which the cardinal feature, namely, 'natural selection,' is on its trial." This puts him at once out of court. Sir William's view of creation, as recorded in Genesis, excited intense irritation, for though, says the critic, he does not say, in so many words, that this world was made in six days, he still has written that "the account of Creation in Genesis was not merely a summary of beliefs current at the time among

the Hebrew prophets, but an inspired revelation."

This weak credulity with respect to the Biblical account of Creation is further denounced by the *Daily Chronicle* in the following remark, "Sir William, *like all of us*, has a few pet theories, which have to be supported *at all hazards*." Now, what seemed specially the desire and pursuit of Sir William, was the practical and actual, as totally distinct from the theoretical; Nature, pure and sole, in every phase, and under all the varied aspects in which she presents herself to our perceptive faculties, was what occupied his thoughts, the reality he sought to interpret; therefore doubtless arose a feeling of distrust, as regards his opinions, among those whose views are simply theoretical. Some of his remarks show how practical his views were; thus he inquires, "Can mechanical causes produce other than physical effects?" Aristotle seems to give this appropriate answer, "Life is the sole cause of form in organisms."

Again, Sir William observes: "When we compare the development of an animal from the embryo, to that of the progress of animals

in time, we find a curious analogy, whereas, in fact the conditions and causes at work are altogether dissimilar, and we have no evidence whatever of identity of cause, and reasoning that there is, is the most transparent of fallacies." On the Darwinian theory, he remarked : " Those who think to build a philosophy, or even a religion, on such data, are mere dreamers, and have no scientific basis for their dogmas." This he states after a long and careful review of the theory ; in fact we may say of Sir William Dawson that he viewed things from a strictly natural and rational standpoint, and casting theory from his consideration, he drew his arguments from Nature's self ; he clipped the wings of fancy, and cast imagination to the winds ; he lived and laboured in the very workshop of the great Creator ; led by Him, he worshipped Him in spirit and in truth. For the best period of a long life spent in the study of geology, and that of evolution, he arrived at the conclusion, that the theory of evolution could not be legitimately inferred from the facts of geology, based on the strictest observation. This he stated in opposition to many friends of his own, and many eminent speculators

in the geological field, making thereby, doubtless, many enemies, for the lovers of theory are specially sensitive as regards their opinions and preconceived notions of what Nature is ; in fact, the further from confirmation they really are, the stronger seems to grow the prejudice in favour of them ; thus opponents to Sir William will inevitably arise, but let us hope that his facts will predominate over all obstacles, and that he may prove the forerunner of a new order of beliefs, in facts, as opposed to theories, however ingeniously manipulated, or by however imposing names enforced. In truth a brighter prospect seems to open before us, and what Mr. Balfour so admirably described as "The Psychological Climate" is clearing, and the age of theory, of Darwinism and Tyndallism, of Empiricism and Agnosticism, is clouding over.

•A few words on Agnosticism (as yet unnoticed) seem permissible. It is then an affected title of humble parentage, yet as full or fuller of pride than humility. It is in fact a crude and weakly appointed form of atheism ; it gives the lie to its own assumed title through all its course. To the Agnostic all is clear in Nature, though nothing actually

known, and further still, his strong belief is, that there is no unknowable, therefore his own certified ignorance is no barrier to his intellectual ambition, and he looks confidently forward to the full knowledge of the unknown, beyond which there is no unknowable. He then fully realises in his own personality this definition of "*An ignorant person*," which I read in a French paper. In the paper he is thus defined, "*L'Homme qui sait tout*." What better explanation than this can we devise of the veritable Agnostic? But as I previously remarked, a brighter and truer view of creation is opening before us, and the clouds begot of theory are dispersing, leaving facts alone in undisputed possession of the scene, and in furtherance of this result, Monsieur Brunetière has written an article in the *Revue des Deux Mondes*, entitled "The Bankruptcy of Science," on which the *Saturday Review* of January 19, 1895, thus comments: "Monsieur Brunetière's phrase of bankruptcy, does not touch the domain of physics, it merely refers to the materialistic doctrine, which treats as trivial or baneful all speculation that is beyond the range of physical proof." Science then, according to

this, is bankrupt, in the sense that it has failed to satisfy what is in the nature of man, or to explain the mystery which surrounds him ; we must live a life not merely animal, and no science of to-day can teach us how to do so. The *Saturday Review* observes : “ Ten or twelve years ago M. Brunetière’s article would have been received with blustering derision, and any approving voices would have been drowned in the uproar ; indeed, M. Brunetière would probably have lacked the mood for writing, or the courage for printing it ; but a marked change has come over the French mind ; Voltaireinism is nearly dead, and the mockery, and refined, yet bitter cynicism, in regard to spiritual beliefs, wherein Edmund About and many other writers indulged, and which were so well relished by an Epicurean *Bourgeoisie*, have quite gone out of fashion.” This further remark appears : “ It is a mental phenomenon, worthy of recognition, that this most sceptical of centuries is ending in France in a disposition of mind which, if not Christian, is more coloured by Idealism than Materialism ; ” in fact, the writer shows that a great, general change has taken place in the

French view of Nature, and says, "Several writers of note, from being thoroughgoing Materialists have, of late years, with steadily increasing boldness, been reaching towards an Idealism, that is almost, if not quite, religious."

Again, as regards the youth of the present day : " Auguste Comte, Renan, and Darwin, have lost the hold they had, and their increasing mysticism is noted with disgust by the sceptics of a former date, whose opinions were fashioned by a different wave of thought." Hence the inference, that the psychological climate is brightening and purifying, receives much confirmation from observation of the French school of thought, as at present presented to our view.

A few more quotations from the expressed views of eminent men, on the nature, and even danger, of Materialism, deserve notice. Thus Emerson remarks : " Nature always speaks of spirit, it suggests the absolute, it is a perpetual effect, and he is the happiest man who learns from Nature the lesson of worship." Plato said : " The problem of philosophy is to find, for all that exists conditionally, a ground unconditioned and absolute." Des

Cartes, an assumed atheist and materialist, speaks of "The inevitable rising of thought from its fragmentary aspects, in our habitual consciousness, to the infinite and perfect existence, which God is." In another place he says, "The majority of men do not think of God as an infinite and incomprehensible being, and sole author from whom all things depend."

With regard to the links, so much relied on by the evolutionists, so eagerly sought for, yet so seldom actually found, Voltaire remarked, "Everything is linked means no other than everything is ordered; God is the cause and master of this order. The Jupiter of Homer was the slave of destiny, but, in a purer and more perfect philosophy, God is the master of destiny, matter nor circumstance are masters, but God alone." Respecting this truth, or similar truths, which Nature so persistently and so openly brings to our notice, Carlyle remarks: "The men who refuse to acknowledge these, sink from reverence for their Creator to admiration of themselves; and what a descent is this, and to what confusion it tends;" he then further remarked: "We will hail the French Revolution, as

shipwrecked mariners the sternest rock, as a true apocalypse, though a terrible one, to this false and withered time, testifying once more, that Nature is preternatural, if not divine, then diabolic, that semblance is not reality, that it has to become reality, or the world will take fire under it, and burn it into what it is, nothing."

Canon Tristram, at a Church meeting on Materialism and scientific infidelity, spoke of "a cloud of flimsy cobwebs laboriously woven to raise man's uncertainties above God's certainties;" and Tennyson, on science of this order, wrote the following lines :

Let her know her place,
She is the second, not the first,
 A higher hand must make her mild
If all be not in vain, and guide
Her footsteps moving side by side
 With wisdom, like the youngest child.
For she is earthly of the mind,
 But wisdom heavenly of the soul.

Piazzi Smith, on scientific infidelity, wrote thus : "We have already seen that unhappy French nation, at their first Revolution, formally declare that there was no God, elevate man in His place and abolish the annual

chronology, dating from the Christian era." Muller stated that the day of Idealism in Germany was past, and the new generation fed on Materialism ; even psychology was become physiological. An ancient philosopher observed, as to the intellectual culture then in force : "Seneca signifies little on this point, being no better than a cosmoplastic atheist, inasmuch as he made a certain plastic Nature, devoid of animality, or consciousness, to be the highest principle and force in the universe." Dr. Manning, on the modern state of culture, remarked : "It is a departure from Christian order, an evil spirit sits behind it, and atheism and anarchy are before it ; this is the abyss towards which the world is blindly rushing ;" and Dr. Newman discerned in the liberal and advancing powers of mind the Antichrist of the aggressive intellect. Plato remarked : "The Power, which framed the mind at first, stands like a wall of adamant against us, when we would presume to pass the barriers which He has erected." Socrates spoke of the knowledge of the one true God, of whom the sun is the type, and the material world but the creature and the shadow.

On the Materialists and their philosophy, Carlyle declared : " Such men walk abroad into peaceable society in full daylight, with rattle and lantern, and insist on guiding and guarding you therewith, though the sun is shining in all its usual splendour." He said : " Creation lies before us like a glorious rainbow, but the sun that made it lies behind it, hidden from us." On scientific infidelity he remarked : " Thou wilt have no mystery or mysticism, wilt walk through the world by the sunshine of what thou callest truth, or by the hand-lamp of what I call attorney logic and explain all, account for all, or believe nothing." These remarks, few out of the many that might be made, testify to the views held by eminent men on Materialism.

The following seems a legitimate inference as regards the doctrine. The attempt to give a rational explanation of Materialism seems the most certain means that could be devised in order to prove the fallacy of it, for the instrument, necessarily employed with this intention, is the immaterial reason, without which no ideas of any sort can exist, and no theory be concocted, we should in fact be in-

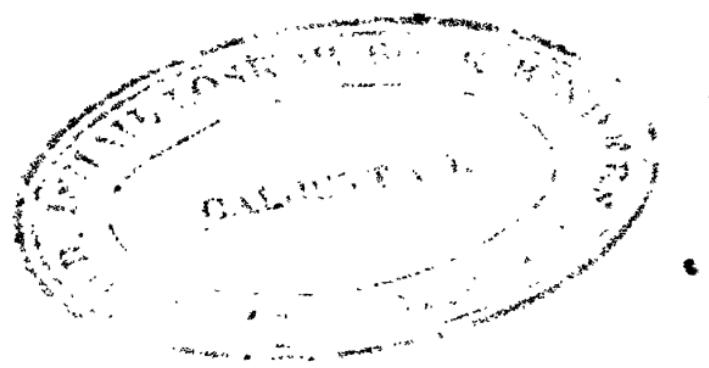
capable of explaining or conceiving anything ; and as regards Materialism or immaterialism we could make no distinction between them ; in fact, without reason this world would be to us an intellectual blank, as it really is to the brute creation, and it seems incredible that man, the reasonable being he unmistakably is, should so far forget the high privilege he possesses in it, as to credit matter with the power which he alone on earth inherits ; but as matter, *per se*, can neither think nor reason, then there must be a cause, not within itself or of itself, that rules, directs, and coerces it, a power and a law, diversely manifested to our senses, wondering, wandering, incomprehending, and too often utterly ignoring, a first and creative cause or power ; from sense to sense they appeal, and therein rest, and what I cannot see I won't believe in, comprises all their hopes, as it necessarily does all their science. The link is thus presumptuously severed that naturally connects man with his Maker. Aubrey de Vere makes this remark in one of his works : "If it can be proved that evolution is a baseless fabric, void of credibility, I will throw science to the winds,

and worship God in Nature as David and our Fathers did." In conclusion let us hope that the proof so much desired may not be long before it will appear, and so demonstrate the wisdom of the aphorism :

Magna est veritas, et prevalebit.







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